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15 April 1983

# USSR Report

## ECONOMIC AFFAIRS

No. 1049

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# USSR REPORT

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INDUSTRIAL DEVELOPMENT AND PERFORMANCE

STATISTICS REVEAL SHORTFALLS OF 1982 ECONOMIC PERFORMANCE

Bonn DIE WIRTSCHAFT DES OSTBLOCKS in German 16 Feb 83 pp 4-6

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B. About Production and Enterprises

In 1982, Soviet industry remained far under the plan target--Absolute production decreases in the metallurgical industry and chemistry--Improvement in coal mining--An increase of only 4 million tons in oil.

The report on the economy for the past year, published in Moscow at the end of January, shows an increase in gross production of industry of 2.8 percent, 2.9 percent including consumer goods, and an increase of productivity of 2.1 percent. These figures are far below the plan target. The economic plan for 1982 had called for 4.7 and 4.1 percent. (In 1981, there had still been increases of 3.4 and 2.7 percent. The 1983 plan calls for 3.2 and 2.9 percent).

Absolute production decreases by comparison with 1981 were registered this time above all in the metallurgical industry with respect to steel,

rolling stock and steel pipes, as well as in the chemical industry with respect to sulphuric acid, synthetic tars and synthetic products. These decreases, furthermore, were again registered with respect to Diesel locomotives, freight cars and in the motor vehicle sector, but beyond this also with respect to building materials (cement and reinforced concrete construction). There has also been a 1 percent decrease in the freight turnover of the Soviet railway system. In the case of mineral fertilizers and forging presses, the result--in spite of an increase--remained under the target.

There was a clear improvement in coal mining, for many years the problem child of the Soviet economy. Here the output of 710 million tons attained in 1976 was substantially surpassed for the first time with an output of 718 million tons. Oil production continued to increase, but with 4 million tons the smallest yearly increase thus far was attained. There has been a slight improvement in the production of iron ore. The manufacture of tractors remained at thelevel of the past year. In the case of natural gas the expected high production increase of an additional 8 percent was registered. In so doing, the transportation output via the pipeline network increased 29 billion cubic meters. New pipeline sections with a total length of more than 9,000 kilometers were put into operation, compared to 5,700 kilometers in 1981.

Compared to 1981, capital investments increased 2 percent, in connection with which--as already during the previous year--the opening of approximately 200 new industrial enterprises was reported. These include, among others, new capacities in energetics totalling 9.5 million kilowatts, the oil refinery of Achinsk, Frasnoyarsk Kray, as well as two new coal mines in the Donbas and in the Tula Oblast, and a new strip mining operation in the Far Eastern Maritime Kray, the first building stage of the Karelian MIning and Processing Combine in Kostomuksha, as well as the Oskol Electro-Metallurgical Combine, a new converter division in Dneproderzhinsk, a new tin plate complex in Karaganda, new large capacities for synthetic tars and plastics in the Mogilev Khimvolokno [Chemical Fibers] Production Association and for chemical fibers and threads in the Sibvolokno [Siberian Fiber] Enterprise in Krasnoyarsk Kray, an experimental enterprise for the manufacture of instruments for gas testing in Vinnitsa. All together, however, it proved to be impossible to put all planned enterprises into operation on schedule, which IZVESTIYA attributed, above all, to an excessive spreading of the "investment front".

The number of workers and employees employed in the entire Soviet national economy increased in 1982 by 1.2 million (1.6 million in 1981) to a total of 115.2 million compared to a total population of 271.2 million at the end of 1982.

The average monthly wage of the Soviet people increased from 172.5 to 177.3 rubles in 1982, with real incomes, however, increasing by only 0.1 percent. This contrasts with an improved retail trade turnover of 0.3 percent, in connection with which the supply, as before, was characterized as unsatisfactory. As a result, savings depostis increased by 8.5 billion rubles.

The sale of individual goods in retail trade yielded the following picture for 1982 compared to the preceding year in percent:

| | | | |
|---|---|---|---|
| Grain products | ± 0 | Clothing, underclothing, fabrics | ± 0 |
| Meat and meat products | + 3 | Knitted goods | + 3 |
| Fish and products | + 4 | Leather shoes | + 1 |
| Butter | - 1 | Soap and detergents | - 5 |
| Vegetable fats | + 7 | Furniture | + 2 |
| Margarine | + 5 | Refrigerators | - 5 |
| Milk products | + 3 | Washing machines | + 2 |
| Cheese | + 3 | Vacuum cleaners | + 3 |
| Eggs | + 3 | Clocks | + 3 |
| Sugar | + 2 | Cameras | - 2 |
| Confectionery | + 2 | Radio installations | - 2 |
| Tea | + 9 | Televisions | + 6 |
| Potatoes | +10 | incl.: color televisions | +18 |
| Vegetables | + 4 | Magnetic tape recorders | + 7 |
| | | Cars | ± 0 |

The housing construction plan was not fulfilled. Two million new apartments were built ready for occupancy, with a total area of 107 million square meters, i.e., 53.5 square meters per apartment. Of these, 32 square meters [sic] of living space were built in rural areas.

Individual Soviet Products in 1982 As Compared to 1981 in Percent

| | | |
|---|---|---|
| Electric power | 1,366,000,000,000 kilowatt hours | + 3 |
| Oil with gas condensation | 613 million tons | + 0.6 |
| Natural gas | 501 billion cubic meters | + 8 |
| Coal | 718 million tons | + 2 |
| Steel | 147 million tons | - 0.9 |
| Ferrous metal-finish-rolled products | 102 million tons | - 0.7 |

| | | |
|---|---|---|
| Steel pipes | 17.9 million tons | - 2 |
| Iron ore | 244 million tons | + 0.8 |
| Mineral fertilizer (100%) | 26.7 million tons | + 3 |
| Agricultural pesticides | 533,000 tons | + 6 |
| Sulphuric acid | 23.8 million tons | - 1 |
| Synthetic tars and plastics | 4.1 million tons | - 0.8 |
| Chemical fibers and threads | 1.2 million tons | + 2 |
| Automobile tires | 61.7 million units | + 2 |
| Synthetic detergents | 1.1 million tons | ± 0 |
| Turbines | 17.3 million kilowatts | +18 |
| Alternating current motors | 53.3 million kilowatts | + 1 |
| Industrial robots | 5,400 units | +61 |
| Long-distance Diesel locomotives | 3.6 million horsepower | - 4 |
| Long-distance electric locomotives | 3.7 million horsepower | + 8 |
| Freight cars | 58,600 units | - 4 |
| Motor vehicles, total | 2,173,000 units | - 1 |
| including: | | |
| Trucks | 780,000 units | - 0.9 |
| Passenger cars | 1,307,000 units | - 1 |
| Buses | 85,700 units | - 1 |
| Tractors | 47.9 million horsepower | ± 0 |
| Grain combines | 112,000 units | + 5 |
| Excavators | 42,700 units | + 1 |
| Paper | 5.4 million tons | + 0.7 |
| Cement | 124 million tons | - 3 |
| Reinforced concrete construction | 123 million cubic meters | - 1 |

| | | |
|---|---|---|
| Fabrics of all types | 11.2 million square meters | + 1 |
| Leather shoes | 730 million pair | - 0.7 |
| Clocks | 69.9 million units | + 2 |
| Radio installations | 8.9 million units | + 2 |
| Televisions | 8.3 million units | + 2 |
| including: Color televisions | 3.1 million units | +15 |
| Refrigerators | 5.8 million units | - 2 |
| Washing machines | 4.0 million units | + 2 |
| Motor cycles and scooters | 1.1 million units | + 1 |

8970

CSO: 1826/20

# REGIONAL ECONOMIC DEVELOPMENT EXAMINED

Latvian SSR

Moscow VESTNIK STATISTIKI in Russian No 11, Nov 82 pp 3-8

[Article by G. Baltin', chief of the La SSR Central Statistical Administration: "In the Constellation of Fraternal Republics"--Cross Reference: See JPRS'82719, 24 January 1983 No 1037 of this series, pp 15-41]

/Text/ In 1940 the Latvian people overthrew the dominant rule of the bourgeois dictatorship. On 21 July 1940 the new parliament, expressing the will of the Latvian people, proclaimed a Soviet regime and declared Latvia to be a Soviet Socialist Republic. On 5 August 1940 the USSR Supreme Soviet accepted Latvia into the USSR with the rights of a Union republic.

Enormous damage to the republic's economy, as expressed in terms of a total of 20 billion rubles (in pre-war prices) was inflicted as a result of the attack by Hitler's Germany and the fascist occupation.

After the end of the Great Patriotic War the working people of Soviet Latvia, with the fraternal aid of the other peoples of the USSR restored the devastated national economy within an historically brief period of time. As early as 1947 the republic's industry was turning out 28 percent more production than in 1940.

During the years of the Soviet regime in Latvia a large program of capital construction has been carried out. Some 21.8 billion rubles of capital investment have been utilized for the development of the national economy, including 5.9 rubles (27 percent of the total capital investments in the national economy) for the development of industry. Over the post-war years in all 215 major state industrial enterprises have been put into operation. As a result, the total volume of industrial output grew by a factor of 46, in comparison with 1940. In other words, within a period of 8 days it now produces just as much as for all of 1940. With regard to industrial growth rate during the post-war years, Soviet Latvia left far behind all the developed capitalist countries of Western Europe and America; the industrial growth rate in this republic during the years 1951--1981 surpassed by a factor of 3-4 the analogous indicator in Italy, the FRG, Canada, more than 5 times that in the United States and France, and 16-fold that in Great Britain.

Developing at outstripping rates have been the sectors which basically ensure technical progress in the national economy--machine building and chemistry. The output volume of the chemical and petrochemical industry grew in comparison with the pre-war period by a factor of 641, while that of machine building and metal working--by a factor of 617. As a result, major shifts occurred in the sectorial structure of industry; machine building and metal working became the leading branches, providing almost 27 percent of the total output volume of all industry. The electronics industry, instrument building, and power-engineering machine building were created anew; there was a sharp increase in the production of means of communication, as well as the output of the electrical-engineering and radio industry. Already during the course of the first post-war five-year plan such large enterprises as the following were built: the REZ Riga Electric Machine Building Plant, the Avtoelektropribor Plant, the experimental plant for hydrometric instruments, the Motovelotsep Daugavpils Plant, and the Elektroinstrument Plant in the city of Rezekne. The following were restored, expanded, and modernized: the VEF Plant, the Riga Railroad-Car-Building Plant, the Sarkana Zvaygzne Motor Plant, the Radio Plant imeni A. S. Popov, the Daugavpils Locomotive-Repair Plant, and others. During the 1950's the Riga Electric Light Plant, the Riga Diesel-Building Plant, and the Yelgavsel'mash Plant went into operation; during the 1960's and 1970's the Rezekne Milking-Unit Plant, the Mini-Bus Plant in Yelgava, and others began operations.

In 1981 every second moped, every second milking unit, every third mainline passenger railroad car in the country, as well as every fourth streetcar and radio set, every sixth bus, and every sixth washing machine bore the trademark of Latvian plants.

Qualitative changes have occurred in the chemical industry, which in bourgeois Latvia was represented, for the most part, by the production of rubber footwear. During the years of the Soviet regime the following have been built: the Daugavpils Chemical-Fiber Plant, the Valmiera Fiberglass Plant, the Riga Polyethylen-Products Plant, an entire complex of chemical enterprises in the city of Olayne, as well as the Ventspils Port Plant. The production of mineral fertilizers increased by a factor of 5.3, as compared with 1940. Every year the production of new types of pharmaceutical products is mastered.

More than 40 percent of the total volume of this republic's industrial output comprises consumer items. Light and food industries were relatively well-developed sectors in bourgeois Latvia, but they too have been transformed unrecognizably during the years of the Soviet regime; they have been furnished with up-to-date equipment. During the post-war period such major light industrial enterprises as the Ogrskiy Knitted-Goods Combine and the Liyepaya Haberdashery Combine were built. In 1981, as compared with 1940, the production of knitted goods had increased by a factor of 13, that of hosiery items--by 22, and leather footwear--by 10. In the production of hosiery items and knitted outerwear on a per capita basis the LaSSR ranks first among the Union republics. Great development has been attained by the fishing industry. During the years of the Soviet regime an up-to-date fishing fleet has been created, and the capacities of fishing vessels and fishery combines have been significantly increased. There has been a considerable increase in the production of canned goods--by a factor of 49, as compared with the pre-war period.

Growth of industrial production in the republic depends upon increasing labor productivity, as a result of widespread introduction of up-to-date equipment and advanced technology, comprehensive mechanization and automation of production processes, as well as further upgrading the workers' skills and improving the economic mechanism. In 1981, as compared with 1940, labor productivity in industry increased 13-fold. Last year the entire increase in industrial output was achieved by means of raising labor productivity (during the 10th Five-Year Plan there was an 88-percent increase). Just during the course of 1981 alone at industrial enterprises more than 200 automated, semi-automated, and mechanized assembly lines were installed; about 100 production sections and workshops were comprehensively mechanized and automated. Now operating in the republic are more than 100 comprehensively mechanized and automated enterprises and production units, along with 1300 units of equipment having programmed control.

There is constant improvement in the quality of output being produced. In 1981 the State Badge of Quality was possessed by 2800 items, and their proportion within the total volume of industrial output reached 19 percent. The republic's successes in improving product quality were noted by the General Secretary of the CPSU CC, Comrade L. I. Brezhnev in his report to the 26th CPSU Congress.

The principal sector of the national economy--industry--creates 55 percent of the republic's national income, extensively utilizing fuel and electric power, raw materials, and equipment, received from other Union republics. Its output is exported to more than 100 of the world's countries. The present-day scope of production concentration and specialization requires that each republic, particularly the modest-sized ones, specialize in producing a relatively limited range of items, manufacturing them in large amounts at large enterprises and providing the needs of the entire country.

In 1980 some 45 percent of the industrial output produced in the republic was exported. Shipped beyond the boundaries of the republic were 80 percent of the output of the chemical and petro-chemical industries, 67 percent of machine building and metal-working, 41 percent of light industry; practically all the Union republics were markets for the sale of products.

The proportion of machine-building and metal-working output exported during 1980 amounted to 35 percent, while in 1938 it was only 1 percent. The following are almost completely exported: mainline railroad passenger cars and streetcars, diesels and diesel generators, farm machinery, mini-buses, mopeds, means of communication, radio sets, washing machines, and other products of machine building.

In light industry inter-republican specialization has been less developed. In 1981 the other Union republics received 57 percent of the ready-made fabrics produced, 52 percent of the knitted goods, and 62 percent of hosiery and handkerchief items.

Such industrial development in the republic became possible only due to the fraternal cooperation of the LaSSR with the other Union republics.

The LaSSR does not have large energy resources of its own. Of the fuel consumed in this republic during 1980 about 93 percent was provided by the other Union republics, primarily by the RSFSR, which ships in natural gas and petroleum products. Of great importance for the republic was the formation of the Integrated Energy System of the Northwestern USSR, which unites all the Baltic republics, the BeSSR, and part of the territory of the RSFSR. Forty-four percent of the electric power used in Latvia during 1981 was acquired from the neighboring republics; at the same time, within the framework of the integrated energy system great importance attaches to the hydroelectric power stations of the Daugavskiy Cascade in the LaSSR, which are utilized to cover peak loads during the course of 24-hour periods.

The republic imports 45 percent of the raw materials, sets of items, fuel, and other materials used in industry. Especially great is the role of imports in the raw-materials balance of the sectors which determine technical progress in the national economy: machine building and metal working--70 percent, the chemical and petro-chemical industry--80 percent. The import of products is also of vitally important significance for the republic's light industry. The cotton industry uses cotton fiber imported from the Central Asian and Trans-Caucasian republics; 2/3 of it is shipped from the Uzbek SSR; 40 percent of the necessary linen fiber comes from the UkSSR and the BeSSR. The woolen and knitted-goods industry is 70-percent supplied by natural wool shipped in from the KaSSR, KiSSR, GeSSR, and other republics. Various types of artificial and synthetic fibers are provided by enterprises in the RSFSR, artificial and synthetic textile threads--by the RSFSR, LiSSR, UkSSR. Also of great importance for this republic's national economy is the shipment here of machinery and equipment, aimed at increasing and reproducing fixed capital assets.

The party's agrarian policy is being implemented in the republic. Its purpose is to transform agriculture into a highly efficient and highly productive sector, to bring about a situation whereby the population is better provided with food products and industry with raw materials.

During the years of the Soviet regime by means of large capital investments the material and technical base of agriculture has been considerably strengthened. From 1946 to 1981 the amount earmarked for projects of productive purposes amounted to 5.0 billion rubles. By the end of 1981 agriculture had 33,000 tractors, 6800 grain-harvesting combines, and other necessary equipment, whereas bourgeois Latvia had only 1300 small-capacity tractors on kulak-type farms. Now fully mechanized on the kolkhozes and sovkhozes are the basic field operations (plowing, sowing grains and sugar beets, harvesting the grain and silage crops), as well as drying grain; almost fully mechanized is the inter-row cultivation of sugar beets, vegetables, hulling grain, and applying organic fertilizers. Mechanization has been introduced at livestock farms and complexes. In 1981 more than 1.5 billion kW-hrs of electric power were used in agriculture.

Land reclamation work has achieved wide scope. During the post-war years 2.2 million ha of excessively wet lands were drained, whereas in bourgeois Latvia during the time of its existence only 71,000 ha were drained. The effectiveness of these operations is testified to by the fact that the yield of the basic agricultural crops during the years 1971--1981 on the drained lands was

approximately 30--60 percent more than on the remaining areas. The republic's agriculture annually obtains more than 350,000 tons of mineral fertilizers (as calculated at 100 percent of nutritive substances).

As a result of the mechanization and electrification of agricultural production, increase in the crop yield of fields and the productivity of livestock, labor productivity in agriculture during 1981, even with a considerable reduction in the length of the work day, increased by a factor of 4.2 as compared with 1940. The total volume of agricultural output exceeded the 1940 volume by 48 percent, while the livestock output exceeded it by 77 percent. In comparison with 1940, meat production increased by a factor of 2.3, eggs--by 4.3; milk production also increased.

The consistent implementation of the party's agrarian policy has allowed the kolkhozes and sovkhozes to overcome the consequences of the unfavorable weather conditions of 1978--1980. The total gross agricultural product in the year just past increased in comparison with the average volume of the 10th Five-Year Plan by 3 percent, and in the public sector--by 4 percent.

The USSR Food Program for the period until 1990 provides for a speed-up in the rate of growth for the production of livestock products as well as the processing of cheeses and butter. The average annual meat production (in dressed weight) is to be provided during the 11th Five-Year Plan in an amount of 300--310,000 tons and during the 12th Five-Year Plan--340--345,000 tons, for milk the corresponding figures are 1.8--1.9 million tons and 1.9--2.0 million tons, for grain--2--2.1 million tons and 2.1--2.3 million tons. The production of potatoes, vegetables, and fruits is scheduled to increase. We are to achieve a production growth in all types of feeds during the decade amounting to a factor of 1.3--1.4. Operations are to be conducted on reclaiming excessively wet lands over an area of 520,000 ha. By 1990 production from the raw materials of state meat resources is scheduled to grow by a factor of at least 1.4 and that of cheeses--by 1.6.

Based on increased social production, a steady rise has been ensured for the level of the republic's national income and, together with this, the population's material prosperity. In 1981 the national income increased by a factor of 11 in comparison with the pre-war period, and, as computed on a per-capita basis--by a factor of 8. More than 4/5 of the national income is directly used for the needs of the national prosperity (taking into account expenditures on housing and socio-cultural construction).

With the growth in incomes there has been a steady rise in the population's purchasing power, its demand for goods and services. The volume of retail trade turnover of goods in state and cooperative trade in 1981 increased by a factor of 14, as compared with 1940. The sale of food items grew by a factor of 9.8, and that of non-food items--by a factor of 20.

Housing construction has been conducted on a broad scope. During the 20 years of bourgeois Latvia's existence the cities witnessed the construction of less than one million sq m of (usable) housing area, whereas in Soviet Latvia during the years 1946--1981 in urban-type settlements and rural localities there

were 25.4 million sq m built. Last year, in comparison with 1940, housing stocks /available housing/ increased by a factor of 2.3, and there has been an improvement in apartment design.

Great achievements have been attained in the field of health care. The number of physicians per 10,000 population increased from 13 in 1940 to 45 in 1981, which exceeds by a factor of 1.7 the analogous indicator in the FRG, by 2--in the United States, 2.3--in Italy, 2.5--in Great Britain, and 3--in France. During the years of the Soviet regime there has practically been an elimination of such dangerous infectious diseases for the population as polio, diphtheria, with a significant decrease in the disease rate of tuberculosis, scarlet fever, and measles. The population's mortality rate (per 1000 persons), as compared with 1940 and despite the increase in the proportion of persons of advanced age, has decreased by 20 percent. The post-war years saw the construction of a large quantity of hospital-type institutions with 12,800 places, sanatoriums, rest homes, and boarding houses with 24,900 places, and preschool children's institutions with 107,500 places.

During the years of the Soviet regime a genuine cultural revolution was brought about in this republic. In bourgeois Latvia the general-educational secondary schools graduated on a yearly average only 2,000 persons, whereas during the 1945--1981 period 472,000 were graduated (a yearly average of 13,000). If in 1939, as calculated per 1000 of population, only one out of every six inhabitants 10 years of age or older had a higher and a secondary education (complete and incomplete), in 1981 the proportion had reached two out of three. By the beginning of the 1981/82 academic year there were 184 VUZ students per 1000 of population (as compared with 52 in the 1940/41 academic year), which is more than in any of the capitalist countries of Europe. During the post-war years specialized secondary educational institutions have trained 238,000, and the higher educational institutions--127,000 young specialists, whereas in bourgeois Latvia over a period of 20 years (1920--1939) 8,000 specialists with a higher education were graduated.

Significant successes have been achieved in the field of literature and art, as well as in the creation of a network of cultural-educational institutions. The number of books published /circulation/ increased from 2.9 million copies in 1940 to 15.8 million copies in 1981, while the annual circulation of newspapers, journals, and other periodical publications has risen accordingly from 66 million to 381 million copies. The number of persons attending theaters in 1981 amounted to 2.7 million, which exceeds the 1940 level by a factor of 2.9. With regard to number of persons attending theaters per 1000 persons the LaSSR ranks first in the country.

The LaSSR is celebrating the 60th anniversary of the formation of the USSR with great achievements in the development of social production, raising the material prosperity and cultural level of the people's life, as achieved after the restoration of Soviet Latvia and the entrance of the republic into the Union of Soviet Socialist Republics.

Within the friendly family of peoples there is dynamic growth in the economy of all the Soviet republics. Modern-day industry, agriculture, science, a genuine blossoming of culture--this is what characterizes each of them today. At the same time they have their own unique features, their own national-original traits.

From the decree of the CPSU CC: "On the 60th Anniversary of the Formation of the Union of Soviet Socialist Republics"

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## Kirgiz SSR

Moscow VESTNIK STATISTIKI in Russian No 11, Nov 82 pp 8-14

/Article by T. Almayev, chief of the KiSSR Central Statistical Administration: "Development of the Economy and Culture in the KiSSR during the Years of the Soviet Regime"/

/Text/ Almost 120 years have passed since that time when Kirgizia voluntarly became a part of Russia. This fact will remain forever in the memory of the Kirgiz people, since it played a truly historic role.

After the victory of the Great October Socialist Revolution the Soviet regime was established on the entire territory of Kirgizia by the middle of 1918.

Of great importance in the development of the Kirgiz people's national statehood and its formation as a socialist nation was the formation in 1922 of the USSR, the national-state demarcation of the Central Asian republics in 1924--1925, and the formation, in accordance with a decree of the Second Session of the VTsIK /All-Russian Central Executive Council/, dated 14 October 1924, of the Kara-Kirgiz Autonomous Oblast within the RSFSR. On 25 May 1925 by a decree of the VTsIK the Kara-Kirgiz AO was re-named the Kirgiz AO, which on 1 February 1926 became the Kirgiz ASSR. On 5 December 1936 in accordance with the Constitution of the USSR the Kirgiz ASSR was made a Union republic.

In March 1937 the Extraordinary Fifth Session of the Soviets of the Republic adopted the Constitution of the Kirgiz SSR, thus legitimizing the victory of socialism. Having by-passed the capitalist stage of development and having overcome its own economic and cultural backwardness, Kirgizia during the years of the Soviet regime has become an industrial-agrarian socialist republic. The Kirgiz people demonstrated their devotion to the cause of the Communist Party in all the stages of building socialism. During the years of the Great Patriotic War Kirgiz soldiers fought bravely in the ranks of the Soviet Army. During the post-war years the upsurge of the republic's national economy and culture continued.

During pre-war five-year plans the Communist Party and the Government of the USSR carried out industrialization and strove to ensure a more rapid (as compared to the All-Union level) growth rate for industry and capital investments in the previously economically backward national republics. During the period

from 1925 to the beginning of 1941 capital investments in Kirgizia's national economy exceeded 280 million rubles. During the years 1928--1940 some 140 industrial enterprises were built and put into operation. In 1940, as compared with 1913, the amount of gross industrial product increased almost 10-fold.

For Kirgizia, which has strode forward from a clan system to socialism, the path of successes in economics, science, and culture would have been impossible without the help of all the people of the Land of the Soviets and, above all, that of the great Russian people.

In creating the foundations of a socialist economy great help was rendered to Kirgizia by the working people of the country's industrial centers, who sent to the republic's construction sites staffs of skilled workers, engineers, technicians; they also sent machinery, equipment, etc.

During the years of the Soviet regime the republic's industry has achieved significant successes. The industry of the KiSSR today numbers more than 100 sectors, in which approximately 3,000 different kinds of items are produced. The republic makes a substantial contribution to the All-Union production of nonferrous and rare metals, automated and semi-automated lines, electric motors, forging and pressing machines, electric-insulating materials, and custom-made physics instruments.

During the 1930's deposits of ferrous metals began to be worked.

During the years of the Soviet regime in Kirgizia many new branches of industry have been created; substantial changes have occurred in its territorial distribution. Machine building and metal working have developed with particular rapidity.

One of the biggest enterprises in Kirgizia is the Farm Machinery Plant imeni Frunze. This is the only plant in the USSR which produces pickup balers earmarked for export. The republic's industrial output (electrical engineering items, farm machinery, machine tools, technical equipment for the food industry, non-ferrous metals, cotton fiber, silk yarn, etc) is shipped out via All-Union exports to 60 of the world's countries (among them are Great Britain, Canada, France, Yugoslavia, and others).

This is one of the one of the witnesses as to how a previously nomadic people, thanks to the wise, Leninist nationality policy, was able to stride across an entire historical epoch and go ahead in its development of many capitalist countries.

Considerable importance has been assumed by the building-materials industry (plants making bricks, reinforced-concrete, and limestone products), as well as the cement industry. During the 1960's large plants were built for making precast, reinforced concrete and large-panel home construction, along with a cement-slate combine in Kant, and others.

During the years of the Soviet regime in the process of building socialism the republic began to ship to other regions of the country not only coal and agricultural raw materials, but also the products of the food and light industries.

Today the sectors of the light and food industries produce about 1500 kinds of consumer products. Light industrial output accounted for 29.8 percent of the republic's total industrial output in 1981. The textile industry has been well developed; its largest enterprises are the Oshksiy Production Cotton Association imeni 50th Anniversary of the October Revolution, the Silk Combine imeni Komsomol in the city of Osh, as well as the worsted-cloth combine, spinning-and-weaving and knitted-goods factories in the city of Frunze.

Sectors of the food industry are represented by enterprises of the meat, butter and cheese making, milk, flour and groats milling, and sugar industries. Likewise well-developed are the following sectors: pastry, liquor and vodka, wine-making, the production of canned fruits and vegetables, and tobacco.

During the 1960's large-scale production associations and combines began to be formed with the rights of associations; today there are more than 40 of them, among which are the following: the Issyk-Kul' Association of Electrical Engineering Plants, the Kirgizavtomash Production Association, the Frunze Shoe Production Association, Garment Production Associations imeni VLKSM and imeni 1 May.

From year to year the technical equipment of labor is rising, and there is an increase in the unit capacity and productivity of the machines, machine tools, mechanisms, etc. being turned out. The power-worker ratio in industry during 1981 increased by a factor of 2.3, as compared with 1960.

Work is being conducted in the republic on raising the technical level and quality of industrial output being produced. As of 1 January 1982 the State Badge of Quality was possessed by 796 brands of products.

During the years 1927--1928 a land and water reform was carried out in the southern part of Kirgizia; it was an important preparatory phase in the transition to the collectivization of agriculture. The mass collectivization which was unleashed in 1929 led to socialist transformations in Kirgizia's backward agriculture, numbering about 100,000 merely small livestock-raising farms, 2/3 of which were nomadic or semi-nomadic. One of the most difficult and specific problems of building socialism in Kirgizia was solved--the conversion of nomadic farms to a settled basis.

The small, peasant farms were combined into kolkhozes. During the 10th Five-Year Plan inter-farm cooperation and agro-industrial integration were implemented, representing a new phase in the practical promulgation of the ideas of the Leninist cooperative plan under the conditions of developed socialism. At the start of 1982 the republic had 39 inter-farm enterprises engaged in the production of agricultural output and 52 inter-farm enterprises engaged in servicing agricultural production.

The transition to the stage of developed socialism has been characterized by an ever-increasing amount of capital investments in the development of agriculture: during the 7th Five-Year Plan--563 million rubles, in the 8th--955 million, in the 9th--1309 million, and in the 10th--1559 million.

The consistent implementation of the party's agrarian policy, the conversion of agriculture to an up-to-date industrial basis, onto the path of a multi-faceted intensification has allowed us to significantly strengthen the material and technical base of kolkhozes and sovkhozes, to sharply increase harvest yields, the total harvests of grain and other agricultural crops, and the production of livestock-raising products.

In 1981 the volume of the gross agricultural output amounted to more than 1.5 billion rubles and exceeded its 1913 level by a factor of 7.4, and its 1940 level--by a factor of 3.8.

If before the Revolution in Kirgizia the principal farm implements were the omach and the ketmen' , by the beginning of 1982 the republic's agriculture had 26,838 tractors, 4,561 grain-harvesting combines, 3,068 corn-harvesting and silage-harvesting combines, 632 sugar-beet-harvesting combines, 930 cotton-picking machines, and a great deal of other farm equipment.

In the KiSSR just during the past 20 years the energy capacities of agriculture increased four-fold, the power-worker ratio on kolkhozes and sovkhozes tripled, the capital-labor ratio quadrupled, labor productivity increased by a factor of approximately 1.5, and deliveries of mineral fertilizers increased several times over.

The technical retooling of agriculture has essentially changed the nature of agricultural labor, which is becoming more and more a variety of industrial labor. The number of machine-operating personnel on kolkhozes, sovkhozes, and inter-farm, agricultural enterprises in 1981 amounted to 54,000 persons (in 1940 this figure was 11,000).

During the years of the Soviet regime significant measures have been carried out with regard to land reclamation; there has been modernization of old irrigation systems and the building of new ones, as well as canals (the Large Chuyskiy and the Otuz-Adyrskiy) and reservoirs (the Ortotokoyskoye, Naymanskoye, Bazar-Kurganskoy, and others), which has allowed us to irrigate lands suitable for agriculture in an area amounting to 952,600 ha.

The standards of agriculture have risen. Minerals and chemical means of plant protection are being applied. This has made it possible to increase the harvest considerably. If in 1940 the average harvest yield for cotton amounted to 14.8 quintals per ha, in 1980 it was 27.1 quintals per ha, while the corresponding figures for tobacco were 7.4 and 22.7 quintals per ha.

The principle sector of Kirgizia's agriculture is livestock raising. For the most part, sheep are raised. By virtue of introducing new, highly productive breeds of animals and strengthening the feed base, there has been an increase in the yield of sheep raising (the head of sheep in 1981, as compared to the Pre-Revolutionary period, increased by a factor of 4.3) and in dairy-cattle raising.

In comparison with the Pre-Revolutionary period, meat production has increased by a factor of 4.2, wool-7.1, milk--7.5, and eggs--22.3.

Kirgiz peasants are filled with determination to make their own contribution to carrying out the Food Program of the USSR, as adopted at the May (1982) Plenum of the CPSU CC. The chief tasks of the KiSSR in implementing this program are as follows: to ensure the average annual production of meat (in dressed weight) during the 11th Five-Year Plan in an amount of 170,000 tons, and during the 12th Five-Year Plan this figure would be 200--210,000 tons; for milk the respective figures are 700,000 tons and 770--800,000 tons; production of all types of feeds are to be increased by a factor of 1.5--1.6; by 1990 an increase must be achieved in the production of vegetables and melon crops by a factor of 1.6, fruits and berries--1.5, grapes--1.8; over the course of this decade at least 150,000 ha of irrigated lands must be put into operation, 750,000 ha of pasture-lands must be freed, etc.

Successful development of agriculture in Kirgizia has been facilitated by extensive training of specialists. In 1980 some 24,000 persons with higher and secondary specialized educations were employed at agricultural enterprises and organizations.

During the years of the Soviet regime an enormous program of construction has been carried out. The total amount of capital investments over the years 1925--1981 came to 17.4 billion rubles. During the period of the 10th Five-Year Plan alone the state and cooperative enterprises and organizations put into operation fixed capital assets 2.8 times greater than during the three post-war five-year plans taken together.

Construction in the KiSSR did not come to a halt even during the years of the Great Patriotic War. Many large, industrial enterprises were put into operation; there was a regular increase in the average annual volume of fixed production assets being put into operation.

During the years of the Soviet regime in this republic all types of transportation have been developed. In 1981 general purpose, motor-vehicle transport, whose freight turnover comprised 2,055 million ton km, hauled 89.4 million tons of diverse freight. As compared with 1936, freight turnover increased by a factor of 338. During the 1930's general-purpose bus transportation began to carry passengers. In 1981, as compared with 1936, the volume of passenger hauls increased by a factor of 326, while passenger turnover grew by a factor of 356. The development of air transport in Kirgizia began only in 1945; in 1981 it hauled more than 1.5 million passengers. The cargo turnover of water transport in 1981, as compared with 1928, grew by a factor of 47 times, while the amount of cargo hauls on Lake Issyk-Kul' increased by a factor of 56.

During the years of the Soviet regime considerable development has been attained by means of communication. The number of radio relaying points in 1981, as compared with 1940, increased 25-fold, including a 33-fold increase in rural localities.

Our five-year plans are plans for social progress, for increasing the people's prosperity. During the last 20 years alone the national income in this republic rose by a factor of 3.3. The growth of the national income, its distribution in the interests of the working people have allowed us to increase real, per capita income by a factor of 1.8 over a 15-year period.

Payments and privileges received by the population from the public consumption funds in 1981, as compared with 1965, have increased by a factor of 3.6, while the average monthly wages of workers and office employees went up by a factor of 1.7. Pension provisions have improved. In comparison with 1965, pension payments have increased by a factor of 4.2.

The volume of retail commodity turnover of state and cooperative trade in 1981, as compared with 1940, increased in comparable prices more than 20-fold. The republic's population every day acquires goods worth almost 7.6 million rubles.

Great successes have been achieved in housing construction. During the years of the Soviet regime more than 35 million sq m of total area have been put into operation. If during the First Five-Year Plan apartment houses were built with a total area amounting to 0.3 million sq m, in the 10th Five-Year Plan this figure had reached 5.1 million sq m.

Everyday services to the population have developed at a rapid rate. During the years 1965--1981 alone the volume of services rendered to the population throughout the republic as a whole increased seven-fold, including a 12-fold increase in rural localities.

Pre-Revolutionary Kirgizia was a region of almost solid illiteracy. There were neither higher educational institutions, nor tekhnikums, nor any other secondary specialized educational institutions. In 1914 there were 107 schools on the territory of Kirgizia; 103 of them were elementary schools, which had an enrollment of slightly more than 7,000 persons. Newspapers and books were not published. There were no theaters, public libraries, clubs, or other cultural-educational institutions.

During the years of the Soviet regime a great deal of work has been accomplished with regard to universal, compulsory education, development of a network of general-education schools, higher and secondary specialized educational institutions, on expanding instruction of the population without a break from the production line in evening (shift-type) general-educational schools, as well as in higher and secondary specialized educational institutions. National staffs have been developed, and the flowering of the Kirgiz people's socialist culture has been achieved. During the 1981/82 academic year 1,723 general-educational schools had an enrollment of 900,000 pupils, or 27 times more than during the 1924/25 academic year; employed in the general-educational schools of all types are about 49,000 teachers (not counting part-timers ["moonlighters"]), as contrasted to 1,000 during the 1924/25 academic year. During the last few years vocational-technical instruction has been developed, providing a general secondary education along with an occupation. In 1970 six such schools were created, having an enrollment of 1700 pupils. In 1981 their number had increased to 77, and their enrollment had gone up to 36,600. Testimony to the exceptionally rapid growth rate of general secondary education is provided by the fact that, for example, in 1940 such education was received by only slightly more than 1,000 persons, while in 1981 this figure was more than 79,000.

At the present time the republic has 41 secondary specialized and 10 higher educational institutions, which have an enrollment of 107,800 persons, including 57,600 in VUZ's. Within the total number of VUZ students Kirgizes comprise 61 percent, while in the secondary specialized educational institutions this figure is 49 percent.

The republic's population has achieved a high level of education. According to the data of the 1979 All-Union Census of the Population, 57 out of every 1000 persons 10 years old or older had a completed higher education (as compared to 3 in 1939), while 557 had an incomplete higher, secondary (specialized, general, or incomplete) education (as compared to 43 in 1939).

Created in 1954, the Academy of Sciences of the KiSSR is rightly considered to be the true center of knowledge and the staff headquarters of Kirgiz science. At present in the republic the number of scientific workers, including the scientific-pedagogical staffs of VUZ's, comprises more than 8,500 persons, including 200 doctors of sciences and 2,700 candidates of sciences. In 1981, as compared with 1940, the number of scientific workers increased by a factor of 27. The children and grand-children of nomads who not only were unacquainted with universities and science laboratories but even writing itself have become important specialists in the fields of nuclear physics and spectroscopy, cybernetics and radio-optics, genetic engineering and biochemistry, metallurgy of rare and trace elements, and psycho-linguistics.

During the years of the Soviet regime a broad network of public libraries, club-type institutions, cinemas, theaters, and museums has been created. Operating in the republic in 1981 were 1,785 public libraries with book holdings of 20,730,000 copies, 1,158 club-type institutions, 1,228 motion-picture facilities with paid showings, 7 professional theaters, and 13 museums.

In the Kirgiz SSR books, newspapers, journals, and other periodicals are published in circulations of millions. In 1981 the total circulation of books published amounted to more than 9 million copies, including about 500 editions with a circulation of 3.4 million copies in the Kirgiz language.

The creative work of Kirgiz writers, performers, musicians, artists, and cinematographers has received recognition not only in the USSR but throughout the world. The title "Hero of Socialist Labor" has been awarded to the People's Poet of Kirgizia, Aaly Tokombayev. The books by Hero of Socialist Labor and winner of the Lenin and State Prizes, Chingiz Aytmatov have been published in 70 of the world's countries. Lenin Prize winner and board chairman of the Kirgiz Artists' Union, Turgunbay Sadykov, stated the following: "Depictive art as a sphere of spiritual culture of the Kirgiz people was born literally with the Soviet regime."

Based on the most vivid folk melodies, professional music and choreography were created for the first time; quite a few splendid works have been composed by People's Artist of the USSR and State Prize winner, the composer, Kalyy Moldobasanov.

A great deal of attention is paid to children's pre-school education. If in 1925 the republic had only one operating nursery with 8 children, in 1981 the enrollment at 1,271 permanent pre-school institutions was 154,200 children. Extra-curricular education of children is engaged in by 60 Pioneers' Palaces, Pioneers' and Schoolchildren's Houses, 18 Young Technicians' Stations, 8 Young Naturalists' Stations, and others.

During the years of the Soviet regime a network of medical institutions was created which provides free medical aid for the population. In 1981 the republic had 267 hospital-type institutions or 45 times more than in 1913; in 1981 there were 30 physicians and 121 hospital beds per 10,000 of population. Such dangerous infectious diseases as cholera, plague, small-pox, which used to bring great misfortunes to the people, have been eliminated in this republic. Diphtheria, polio, and other serious diseases have been practically eliminated.

Favorable climatic conditions allowed us to develop extensive construction of sanatoriums and health resorts. At the present time the republic has in operation 29 sanatoriums and boarding houses with treatment, having 6,400 beds, as well as 57 rest homes and rest-type boarding houses, having 19,000 beds. Known far beyond the borders of the republic are the sanatoriums, rest homes, boarding houses, and Pioneer camps which are situated on the banks of the high-mountain Lake Issyk-Kul'.

The 11th Five-Year Plan in the Kirgiz SSR has provided for a further upswing in the national prosperity, based on growth in the economy and the effectiveness of social production.

Kirgizia's working people, like all Soviet people, are getting ready to celebrate the 60th anniversary of the formation of the USSR amid circumstances of an enormous political and labor upsurge.

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## Estonian SSR

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/Article by G. Kimask, chief of the EsSSR Central Statistical Administration: "Under the Banner of Brotherhood"/

/Text/ The entire history of the struggle by the Estonian working people for social justice and for the victory of socialism is closely linked with the struggle by all the working people of the former Russian Empire against the exploiters and oppressors. On the next day following the victory of the armed uprising in Petrograd power in Tallinn passed over to the Soviets. At the end of 1918 an Estonian Soviet Republic was proclaimed (the Estland Labor Commune). During that period, however, the ratio of forces was unfavorable for the Estland Labor Commune. In May 1919 the superior forces of domestic and foreign reaction put down the Soviet regime, and a bourgeois dictatorship was established in Estonia.

The 20-year period of bourgeois domination had a ruinous effect on Estonia's economy, transforming the country into an agrarian-raw material appendage of the Western European states. Industry, which had been marked before World War I by a high level of development, fell into a decline. The large metal-forming and shipbuilding plants were idle, and production was sharply curtailed at textile enterprises and other sectors of industry. Wood pulp, shale oil, and phosphorites were exported from Estonia. Agriculture was switched over to producing butter, eggs, and bacon for export.

After the overthrow of the bourgeois dictatorship the newly elected State Duma at its first session on 21 July 1940 adopted a Declaration on the establishment of a Soviet regime on all the territory of Estonia and proclaiming it a Soviet Socialist Republic, and on the following day--a Declaration in which, in the name of the entire Estonian people, a petition was expressed to the USSR Supreme Soviet to accept the Estonian SSR into the Union of Soviet Socialist Republics. In August 1940 the USSR Supreme Soviet satisfied this request.

Soviet Estonia entered upon the path of socialist development. Socialism ensured historically unprecedented rates of progress in all spheres of social life. The Estonian SSR was enabled to utilize the rich experience in building socialism, as accumulated by the Soviet Socialist Republics.

Under the leadership of the Communist Party of Estonia and with the unselfish aid of the fraternal republics, radical socialist changes were implemented in the cities and rural area. The Soviet regime established workers' monitoring controls at all enterprises and then promulgated the nationalization of major plants and factories, mines, banks, transport, large apartment houses, etc. Coming in from the other republics of the Soviet Union were raw materials and orders for industrial products, which permitted work to be given to the unutilized capacities of the enterprises, and unemployment disappeared. Large-scale landownership was abolished, and the allotment of lands to landless peasants and those owning small amounts of land was begun. Sovkhozes began to be created on the basis of the former state-owned and confiscated large private farms; the first kolkhozes and associations for the joint cultivation of the land began to appear. On 1 January 1941 the republic's national economy was included in the State Plan for the Development of the National Economy of the USSR for the Third Five-Year Plan. The economy of Soviet Estonia became a component part of the entire complex of the USSR's economy.

The treacherous attack on our country by Hitler's Germany destroyed the creative labor of Soviet people. There began the heroic resistance of the Soviet people against the German-Fascist invaders for the honor, freedom, and independence of our Motherland. The liberation of Estonia from the occupation forces was completed in November 1944.

Thanks to the consistent implementation by the Communist Party and the Soviet state of the Leninist nationality policy and the multi-faceted support of the fraternal Soviet republics, the consequences of the German-Fascist occupation in the Estonian SSR were eliminated within a brief time period. The Estonian people received enormous aid from the USSR Government. In 1945 almost half of the republic's budget--300 million rubles--consisted of revenues from the Union

budget. The import of goods, raw materials, and equipment comprised almost 262 million rubles, whereas exports accounted for only 80 million rubles. The importation of foodstuffs into Estonia surpassed their exports by a factor of 1.6. These ratios remained similar until the mid-1950's, when a balance was established between imports and exports.

Simultaneously with the restoration of industry, there was conducted the modernization, technical re-tooling, and construction of new plants, factories, mines, along with re-directing the nature of production within certain sectors in accordance with the national economic needs of the entire country. Already in 1946 industrial output surpassed the pre-war level. In all the ensuing years the republic's industry developed at a rapid rate.

In agriculture at this time the main thing was the transition to production on socialist principles. The Communist Party of Estonia, utilizing the experience in kolkhoz construction of the other Union republics, directed the process of collectivization under the conditions of a fierce class struggle. At first the poor and then the broad masses of middle-level peasants began to create kolkhozes. In mid-1947 the first kolkhoz was organized, 1949 became the year of the mass collectivization of agriculture, and by the beginning of 1951 the kolkhoz system had triumphed throughout the republic--90.3 percent of the peasants had joined together in kolkhozes. All this created the conditions for introducing industrial labor methods in agricultural production.

Within an historically brief time period Estonia was transformed into a highly developed, industrial-agrarian republic of the Soviet Union. Particularly outstanding were the 1970's, when the entire Soviet people, all the republics were implementing the historic decisions of the 24th and 25th CPSU Congresses, aimed at increasing the material prosperity and the cultural standard of living of the working people. These tasks were carried out based on the growth of social production by means of intensive factors, increasing labor productivity, and speeding up scientific and technical progress. During these years the republic achieved great successes in economic and social development. This is testified to, in particular, by the following data:

(millions of rubles; in comparable prices)

| | 1970 | 1980 | 1980 in % of 1970 |
|---|---|---|---|
| Gross social product* ..... | 5050.4 | 8277.4 | 166 |
| National income, used for consumption and accumulation* ..... | 2184.0 | 3358.6 | 147 |
| Industrial output ..... | 2831 | 4921 | 174 |
| Capital investment ..... | 576 | 829 | 144 |
| Fixed production assets (at year's end) | 4351 | 8467 | 195 |
| Freight turnover of all transport, in billions of ton km ..... | 13.2 | 18.8 | 143 |

* In actual prices; growth rates computed derived from comparable prices.

The average annual production of agricultural output (in comparable prices) during the 10th Five-Year Plan, as compared with the 8th Five-Year Plan, increased by 233 million rubles or by 27.5 percent.

Over the 10-year period the national income earmarked for consumption and nonproductive construction increased by 55.6 percent; as calculated on a per capita basis, real incomes grew by 42.8 percent, while the public consumption funds increased by 62 percent.

An important role in the period under consideration belongs to the 10th Five-Year Plan. With respect to the growth rate in production volumes, the republic's industry advanced ahead of schedule to the level provided for by the Basic Directions for the Development of the USSR's National Economy for the 10th Five-Year Plan. For attaining high results in industrial development during 1980 and the 10th Five-Year Plan the EsSSR was awarded the Challenge Red Banner of the CPSU CC, the USSR Council of Ministers, the AUCCTU, and the Komsomol CC. The average annual production of the gross agricultural product increased by 13 percent. Further development was also attained by other sectors of the national economy.

Since it is a component part of the comprehensive national economic complex of the USSR, Estonia's economy is closely linked to the economies of the other Soviet republics. Of all the material resources necessary for productive consumption and for satisfying the vital needs of the population, more than one-fifth is covered by means of imports. The EsSSR receives petroleum products, metal products, motor vehicles, tractors, complex equipment and machinery for all sectors of the national economy, the products of basic chemistry, cotton fiber, leather, items of the garment industry, sugar, vegetable oil, fruits, grain, and a great many other types of raw materials and products. And it exports electric motors, low-voltage and high-voltage apparatus, air-conditioning apparatus, excavators, mineral fertilizers, metal and garment items, fabrics, fish products, butter, milk, and other dairy products, pastry items, etc.

Industry occupies a leading place in the republic's economy. Almost two-thirds of the gross social product and more than half of the national income are created in this sector. The volume of industrial production has increased 50-fold, as compared with the pre-war level, i. e., nowadays just as much output is produced in seven days as in all of 1940. During the Soviet regime labor productivity and industrial productivity increased almost 15-fold. More than 4.4 billion rubles was spent during the post-war period on restoration and building new plants, factories, mines, and on modernizing existing ones, as well as furnishing them with new equipment.

The increase in the production volume of individual industrial sectors during the years 1946--1981 is characterized by the following data:

| | | |
|---|---|---|
| Industry as a whole ..... | by a factor of | 68 |
| Electric-power engineering ..... | " | 208 |
| Fuel industry ..... | " | 86 |
| Chemical and petrochemical industry ..... | " | 100 |
| Machine building and metal-working ..... | " | 218 |
| Lumbering, wood-processing, and paper-and-pulp industry ..... | " | 27 |
| Building-materials industry ..... | " | 128 |
| Light industry ..... | " | 63 |
| Food industry ..... | " | 39 |

The growth of electric-power engineering was ensured by means of creating and developing a fuel-energy complex based upon local minerals--fuel shales. Included within this complex are mines and open pits for extracting shale, electric-power stations operating on shales, and combines producing furnace fuel oil and gas from the shales. Shale mining has increased from 0.9 million tons in 1945 to 30.7 million tons in 1981, while the production of electric power has increased from 0.1 billion kW-hrs to 17.8 billion kW-hrs. Shale ash, which is formed at the electric-power stations, is being utilized for producing shale-ash building items and for de-acidifying /"sweetening"/ soils.

The chemical industry is also partially based on local raw materials. A number of valuable chemical products are obtained from shales by means of thermal processing. Phosphorite deposits comprise raw materials for producing mineral fertilizers. Of great importance is the production of goods by industrial chemistry, rubber footwear and consumer goods made of rubber, synthetic resins, plastics, and items made of them.

There is an extensive products list of items for productive use in machine building and metal-working. Many sectors have come into being for the first time during the years of the Soviet regime. These include, in the first place, the electrical-engineering industry and instrument building, whose products are necessary for many sectors. Newly created or extensively developed was the production of excavators, equipment for oil refining, light and food industries, metal structural components and items, etc. Machine-building enterprises are also turning out various types of consumer goods.

Wood-processing and paper-and-pulp production are sectors traditional for Estonia. During the Soviet regime furniture enterprises have been expanded and new ones created. Paper production has increased almost 5-fold. The production of wood-chip and wood-fiber boards has been organized. Skis are made in large quantities.

Such a sector as the building-materials industry has been essentially created anew. Not only has there been a significant increase in the production of bricks, cement, window glass, but industrial-type production has also begun on pre-cast, reinforced-concrete structural components and items, mineral wool, asbestos-cement sheets (slate), and other materials.

The associations and enterprises of the light and food industries produce consumer goods in a large assortment. In bourgeois Estonia these goods were produced basically in a semi-cottage-type manner. Under the Soviet regime enterprises of the light and food industries were enlarged, new factories, dairies, and meat-packing combines were built, and an ocean-going fishing fleet was built. This permitted a sharp increase in the production volume of the most important types of products. For the purpose of concentrating and specializing production, in recent years industrial associations have been created; they account for 39 percent of the total volume of industrial production.

Now operating in the republic's industrial enterprises are approximately 1900 automated, mechanized assembly lines, about 740 comprehensively mechanized, automated, and comprehensively automated workshops and sections. The electric power capacity of industrial enterprises over the last 20 years has more than quadrupled. As a result of technical progess the technical-economic indicators have improved for many production lines.

The growth of industrial production has been achieved, for the most part, by means of increasing labor productivity.

Soviet Estonia's agricultural production is based on large, highly mechanized enterprises--kolkhozes and sovkhozes. In the total commodity output of agriculture the proportion of the public sector comprises 88 percent.

The principal sector of the republic's agriculture is livestock raising. In 1981, as compared with 1940, the head of cattle increased by 289,600 head, pigs--by 694,300 head, and poultry--by 5.1 million head. There was also a corresponding growth in meat production (in dressed weight) from 72,100 to 198,000 tons, of milk--from 781,600 to 1,145,600 tons, and of eggs--from 133.6 to 543.7 million units.

During the years of the Soviet regime there was likewise a significant increase in plant agricultural output; there has been an increase in the harvest yield of agricultural crops.

The tractor pool increased almost 11-fold in comparison with the pre-war level, while tractor capacity during this same period increased by a factor of 31. Now operating on kolkhozes and sovkhozes are 3,600 grain-harvesting and 2,700 silage-harvesting and potato-harvesting combines. As a result of the saturation of agricultural production with equipment, there has been a significant increase in the power ratio in agriculture: per worker from 0.6 hp in 1939 to 59.7 hp in 1981; per 100 ha of sown areas the corresponding increase is from 29 to 638 hp. There has been a sharp increase in the supply of mineral fertilizers--from 17,900 tons in 1939 to 241,000 tons in 1981 (calculated at 100 percent of nutritive substances).

During the period from 1946 to 1981, 3.1 billion rubles were utilized for building production facilities, draining lands, and obtaining agricultural equipment, and, counting the construction of housing and cultural-everyday service facilities on kolkhozes, sovkhozes, and other agricultural enterprises--more than 3.8 billion rubles.

In the final analysis, all this had an effect on the growth of labor productivity, which increased 6-fold in comparison with the pre-war figure.

During the 10th Five-Year Plan on a yearly average per 100 ha of lands suitable for agriculture about 130 quintals of meat and more than 800 quintals of milk were produced. Increases in the number of specialists and machine operators have facilitated further intensification of agriculture. Just during the period from 1970 through 1981 on kolkhozes and sovkhozes the number of specialists with higher and secondary specialized education has doubled, while that of the machine operators has increased by 18 percent.

Agricultural output is also produced in the private, auxiliary farms of kolkhoz members, workers, and office employees. Although in recent years the number of these farms has been reduced, they continue to play a notable role in providing the population with food products.

In the Estonian SSR, as well as throughout the entire country, based on the dynamic growth of the national economy and the increased effectiveness of social production, there has been a constant upswing in the people's prosperity. The average monthly wages of workers and office employees have reached almost 193 rubles, and, taking into account payments and privileges from the public consumption funds--271 rubles, while labor payments to kolkhoz members for work in the public economic sphere amount to a monthly average of 214 rubles. Payments and privileges from the public consumption funds, as computed on a per capita basis, amount to 592 rubles a year.

Housing construction is an extremely important social problem. From 1946 to 1981 apartment houses with a total area of 18.4 million sq m were built in Soviet Estonia. Recently 8--9 apartments have been built every year per 1000 inhabitants. The well-being of the housing fund has increased.

Retail commodity turnover during the years of the Soviet regime have increased more than 13-fold and in 1981 amounted to 1,609 rubles, as computed on a per capita basis. There has been an increase in the consumption of especially valauable foodstuffs, fabrics, footwear, and other goods, as well as providing more durable types of consumer goods for everyday services.

During the last five-year plan alone the republic's higher educational institutions graduated 17,000 specialists--2.8 times more than in the 20 years of the bourgeois regime.

An extensive network of cultural-educational institutions has been created; the most developed forms of amateur artistic activities are choral singing and folk dancing. The republic supports close cultural ties with all the fraternal republics of the country.

One of the principal tasks is health care for the population. Provision of hospital beds has increased by a factor of 2.6 during the years of the Soviet regime. There are 42 physicians per 10,000 persons. Special institutions have been created for maternity and child care.

The decisions of the 26th CPSU Congress opened up new horizons of economic and social development for the Estonian SSR. Provisions have been made for the development during 1981--1985 of outstripping rates of development in the shale chemical, electronics, and electrical engineering industries, as well as in instrument making. Work is been conducted with regard to the technical retooling of the shale-processing industry and the modernization of light and food industrial enterprises.

The republic's national income is growing by 15 percent, industrial output--also by 15 percent, while labor productivity in industry--by 15.8 percent. The average annual volume of agricultural output for the years 1981--1985 will increase, as compared with the previous five-year plan by 12 percent, while labor productivity in agriculture will go up by 20 percent.

During the 11th Five-Year Plan measures will be implemented for further raising the living standards of the republic's population. Thus, based on the growth of production and labor productivity, the average monthly monetary wages of workers and office employees will be increased by at least 9 percent, while the labor payments of kolkhoz members in the public economy of kolkhozes--will go up by 11 percent on an average. Public consumption funds will increase by 23 percent. Housing with a total area of 3.6 million sq m will be put into operation, and the quality of housing construction will be improved. As the conditions are created and resources accumulated, there will be a gradual rise in the minimum wage to 80 rubles a month, an increase in state aid to families having children and young marrieds; there will also be improvements in the working conditions, daily life, rest and recreation of working women.

It is intended to further improve the quality of medical and everyday service to the population, to create more favorable conditions for the growth of the population's educational level. Possibilities are being broadened for the satisfaction of people's cultural needs and their participation in physical-education and hygienic measures.

Throughout the entire country an intense struggle of the working people has been unleashed for carrying out the general course of the 26th CPSU Congress with regard to developing the national economy and increasing the people's prosperity. The organizational work of the party, state, and economic organs is proceeding under the conditions of perfecting the economic mechanism, of converting the economy to a predominantly intensive path of development.

During the first year of the 11th Five-Year Plan the republic's industry ahead of schedule--on 28 December--fulfilled the one-year plan for total production volume and the output of most of the very important types of items. The production increase was achieved solely by means of a growth in labor productivity. There was an improvement in the quality of output produced--the proportion of higher-type products comprised 37 percent of the total output volume, subject to certification.

The broad-based program of social development and raising the people's prosperity which was adopted by the 26th CPSU Congress provides, above all, for improvement in supplying the population with food products. Responsible tasks were assigned to the republic's agricultural workers by the May (1982) Plenum of the CPSU CC. The average annual production of meat (in dressed weight) during the 11th Five-Year Plan is intended to reach 210--215,000 tons, during the 12th Plan --as much as 235--240,000 tons, for milk the respective figures are 1.2--1.3 and 1.3--1.4 million tons, for grain--1400--1450 and 1500--1600, 000 tons; the total potato harvest during the decade is planned to increase by a factor of 1.2, while feed production is to increase by a factor of 1.4. Draining of excessively wet lands is supposed to be conducted on an area of 170,000 ha.

The working people of Estonia's cities and villages have unleashed a widespread socialist competition to fulfill and over-fulfill the planned tasks of 1982, for a worthy celebration of the noteworthy jubilee of our country--the 60th anniversary of the USSR. The pledge of successes lies in the fraternal cooperation of all the peoples of the USSR, solving the specific tasks assigned by the Communist Party for the 11th Five-Year Plan.

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## UNION REPUBLICS' CSA OFFICIALS TABULATE PROGRESS

### Kazakh SSR

Moscow VESTNIK STATISTIKI in Russian No 10, Oct 82 pp 11-19

[Article by T. Zhumasultanov, chief of the Kazakh SSSR Central Statistical Administration--Cross Reference: see JPRS 82719, 24 January 1983 No 1037 of this series, pp 15-41]

> /Text/ . . . Everything from which Kazakhstan is rich and famous today is the goal and the result of the fraternal friendship of peoples, toward which the Kazakh people have striven as a wanderer in the steppe strives toward a life-giving spring. And today our republic is like a model of the entire Union of Soviet Socialist Republics. In this friendship lies our power. In this fratenity is the essence of our life.
>
> Dzhuban Muldagaliyev,
> writer

The history of the Kazakh people has its roots in deep antiquity. Numerous material and spiritual monuments of history show the high culture of its distant ancestors.

In October 1731 the basis was laid for voluntary unification of Kazakhstan and Russia. Since that time, noted D. A. Kunayev at the 15th Congress of the Communist Party of Kazakhstan, the historic destinies of the Kazakh people have been inseparably related to the great Russian people--in them we found our protector and our friend for all times. In union with Russia, in indissoluble friendship with the Russian people, the Kazakh people have acquired a reliable support. This contributed to the breakdown of the patriarchal-feudal bastion, the awakening of productive forces, and the introduction of the Kazakh people to advanced Russian culture and progressive social thought.

The development of the mining industry and the construction of railroads on the territory of Kazakhstan led to the origination of the working class. Workers of Kazakhstan participated actively in the first Russian revolution of 1905-1907. In 1916 a national liberation uprising broke out in Kazakhstan --one of the manifestations of the revolutionary situation that had ripened in the country which was suppressed by tsarist troops.

Great October became a radical turning point in the destinies of all nations and nationalities of our country. The unflickering light of October shone through the age old fog, led the Kazakh people on the broad road of social progress and for centuries joined their historic destiny with the destiny of all peoples of our great homeland. Along with other peoples of the Country of the Soviets, workers of Kazakhstan in heavy battle took the power into their own hands and laid the basis for social development.

On the fronts of the civil war, which also embraced a large part of the territory of Kazakhstan, hand in hand with Russian workers and peasants, Kazakh, Uighurs, Tatars, Dungans and other representatives of the multinational region fought bravely. National units and subdivisions were formed from them. The Kazakh cavalry brigade that operated as part of the legendary Chapayev division became famous.

Soon after the victory of Soviet power, on the basis of a decree signed by V. I. Lenin and M. I. Kalinin, for the first time in their history the Kazakh people acquired statehood. This was a truly historic event in the life of the Kazakh people. All workers of Kazakhstan greeted Lenin's decree with immense joy as a great social conquest.

On the basis of the USSR Constitution in 1936 the Kazakh ASSR was transformed into a union republic.

The formation in 1922 of the Union of Soviet Socialist Republics exerted an extremely favorable influence on the socio-economic rebirth of Kazakhstan. Because of this mighty union under the leadership of the party of communists, the Kazakh people, bypassing capitalism, entered into socialism. It was precisely during the years of Soviet power that the all-around possibilities of a true union of nations of the USSR with equal rights, created by history itself and the community of goals and interests, were revealed.

With real assistance from the working class of the entire country and immense concern on the part of the Communist Party and the Soviet State, even during the years of the prewar five-year plans Kazakhstan created a multibranch industry. It became the leading branch of the republic's national economy.

Socialist industrialization became the basis for the greatest revolutionary transformation in the agriculture of Kazakhstan. By the end of 1940, 190 sovkhozes and 7,075 kolkhozes were organized in the republic, which were served by 331 machine and tractor stations.

During the difficult years of military tests the workers of Kazakhstan, along with all Soviet people, took up the defense of the Soviet homeland and made a significant contribution to defeating the enemy. In the ranks of the Soviet Army two-thirds of the Communist Party and Komsomol of the republic were killed. Unforgetable pages in the history of the Great Patriotic War were written by the 316th (8th guard) infantry division under the command of I. V. Panfilov. Of the Kazahkhstan fighters 512 were awarded the high title of Hero, and 4 of them were twice awarded the Hero of the Soviet Union. Manshuk Mametova and Aliya Moldagulova glorified forever the heroic Soviet women and daughters of the Kazakh people.

During the years of the Great Patriotic War, Kazahkstan was transformed into one of the mighty reserves of the front. During the war years the output of industrial products in the republic increased 1.4-fold; a basis was laid for the development of ferrous metallurgy and, essentially, a machine building industry was created; about 150 enterprises that were transferred from western regions of the USSR went into operation. During 1941-1945 the output of electric energy increased 1.8-fold and the extraction of coal--1.7-fold. During this period the plants that smelted high-quality steel received tens of thousands of tons of ferrochrome from Kazakhstan. The republic provided for the country a considerable proportion of the unionwide production of copper, molybdenum and lead.

Kazakhstan, like other rear regions of the country, became one of the main raw material and food bases: 8 percent of the grain harvested in the country during war years, 11 percent of the prepared meat and 16 percent of the wool which the homeland received.

Workers of the republic contributed more than 1 billion rubles to the defense fund, sent 1,600 carloads of foodstuffs and more than 3.5 million units of various kinds of warm clothing to the front and rendered an immense amount of assistance to regions that were freed from facist occupation; they sent more than 1 million head of livestock there.

Kazakhstan is called the "treasure house" of underground riches in the country. Almost all known minerals have been discovered in its depths. It is especially famous for deposits of various nonferrous metals, including copper; it is rich in lead and zinc and ores of ferrous metals; there are supplies of coal, petroleum and gas; there are large quantities of all kinds of raw material for the construction materials industry.

The Kazakh SSR is an important constituent part of the country's unified national economic complex. The various natural riches of Kazakhstan have determined the specialization of its industry. At the present time this includes the production of ferrous and nonferrous metallurgy products and products of the chemical and fuel industry. During 60 years the overall volume of production of industrial products increased 904-fold. In 1970-1980 more than 600 new enterprises, large shops and industries were put into operation. During these years fixed production capital more than doubled. At the present time Kazakhstan annually produces five times more products than all of tsarist Russia did in 1913.

Nonferrous metallurgy is one of the leading branches of industry in the Kazakh SSR. Copper from the Balkhash and Dzhezkazgan mining and metallurgical combines, zinc from the lead and zinc combine, and magnesium from the titanium-magnesium combines in Ust-Kamenogorsk are distinguished by exceptionally high quality and are a standard on the world market.

Ferrous metallurgy is occupying an every greater proportion in the republic's economy. It is represented by the Karaganda metallurgical combine (Kazakhstanskaya Magnitka), the Aktyubinsk ferrous alloy plant, the Lisakovsk and Sokolovsko-Sarbay ore enriching combines and others. Kazakhstan now smelts more ferrous metals than all of tsarist Russia did in 1913.

During the years of Soviet power the republic has created a powerful electrical energy industry. While in 1913 on the territory of the present Kazakhstan 1.3 million kilowatt-hours of electric energy were produced and in 1920--2.1 million kilowatt-hours, in 1981 it produced 63.7 million kilowatt-hours.

A predominant place in the industry of the Kazakh SSR belongs to machine building and metal processing. From the conveyors of the machine building plants of the republic come thousands of modern kinds of machines, mechanisms and instruments, including metal cutting machine tools, tractors, excavators, wire drawing mills, automated presses, condensers, X-ray equipment, agricultural machinery and so forth.

In terms of the volume of production of many kinds of products of the chemical industry--calcium carbide, sulfuric acid, chrome compounds, chemical fiber and so forth--Kazakhstan occupies one of the leading positions in the country. In recent years the production of mineral fertilizers has increased at rapid rates in the republic's chemical industry, including concentrated and compound fertilizers.

The Kazakh SSR makes a weighty contribution to the development of the country's fuel industry. In 1981 more than 116 million tons of coal were extracted. The republic's petroleum industry is also developing rapidly. Of great significance for the country was the discovery of petroleum deposits in Mangyshlak. The startup of the Gurevo oil refinery laid the basis for the development of the petroleum processing industry in the republic.

In recent years there has been an increase in the volume of production of products from the construction materials industry. The republic has cement plants, enterprises for producing wall materials, reinforced concrete items and parts, a number of large enterprises for producing polymer and heat insulation materials and mosaic facing slabs. In 1981 Kazakhstan produced considerably more cement than the entire country did in 1940.

Light industry, the food industry and other branches of industry that produce consumer goods are developing dynamically.

Very important for the economic development of Kazakhstan was the formation of new branches of industry: aluminum, titanium-magnesium, synthetic resins and plastics, bearing, asbestos and others.

The startup of new industrial enterprises, the introduction of new, highly productive technical equipment and improvement of the organization of industrial production provided for a 5.7-fold increase in labor productivity in 1980 as compared to 1940.

During 1946-1981 126 billion rubles' worth of fixed capital were put into operation. In terms of the volume of industrial production Kazakhstan occupies fourth place in the country, behind the RSFSR, the Ukraine and Belorussia, in petroleum extraction--second and in goal extraction and the output of electric energy--third. It occupies one of the leading positions in terms of extraction of phosphorides and the production of calcium carbide, sulfuric acid and phosporous salts.

The large successes in the republic's industry has brought about radical changes in the nature of its economic relations. Before the revolution Kazakhstan delivered to the Russian market mainly livestock and primary animal husbandry products. Now the Kazakh SSR delivers to all the union republics more than 300 kinds of complex industrial items, including machines and equipment, metal cutting and forging machine tools, power transformers, X-ray equipment, tractors, excavators and so forth.

Kazakhstan exports industrial products to more than 80 countries of the world, including to all of the CEMA countries. Kazakhstan produces for the foreign market ferrous and nonferrous metals, products of the chemical and petrochemical industry and wire drawing machine tools.

During the years of Soviet power Kazakh SSR agriculture has been transformed into a multibranch, highly mechanized industry which is developing on the basis of comprehensive mechanization, intensification and specialization. The republic's agriculture is on the path of steady advancement. It is one of the main branches of the economy, on whose development its progress as a rise in the standard of living of the Soviet people depend to a large degree.

At the end of 1981 in Kazakhstan there were 2,500 sovkhozes and kolkhozes, and 236 interfarm enterprises and associations. For 1 sovkhoz there is an average of 14,900 hectares of planted area, about 12,500 head of sheep, 2,700 head of large horned cattle, and fixed production capital valued at 7.3 million rubles.

Workers of Kazakhstan have achieved large successes in the development of agricultural production and the implementation of the party's modern agrarian policy. The heroic virgin land epic which has become a symbol of the labor heroism of all the Soviet people occupies a special place in the history of the republic and in the history of the country. With the assimilation in 1954-1960 of 25.5 million hectares of virgin and long-fallow land, the Kazakh SSR was transformed into one of the country's major grain bins.

The conquered virgin land made it possible to increase the planted area in the republic to 36.2 million hectares, an 8.7-fold increase over 1913 and a 3.7-fold increase over 1953. In 1981 the Kazakh SSR had 17 percent of the planted area in the country (in 1940--4.5 percent).

The decisions of the March (1965) Plenum of the CPSU Central Committee gave a new impulse to the development of agriculture in Kazakhstan. During the years that have passed since then the state has invested more than 32 billion rubles in the development of the republic's agriculture. This made it possible to equip the sovkhozes and kolkhozes with highly productive technical equipment, to construct new facilities for production and cultural-domestic purposes, and to build up auls and villages. Working on the republic's fields last year were almost 240,000 tractors, 109,000 grain harvesting combines and 136,000 trucks, which is a 5-6-fold increase over 1953 (in physical units).

The republic is doing a large amount of work for land reclamation. The Irtysh-Karaganda canal, which is unique in its dimensions, is in operation over a distance of almost 500 kilometers. Construction has been started on a second section of the canal for transferring water into the Dzhezkazgan region. Irrigated land occupies an area of 2 million hectares, a 1.5-fold increase over 1965.

As a result of the electrification of agriculture, almost all sovkhozes and kolkhozes of the republic have been hooked up to the state energy system. In 1981 they utilized more than 5.9 billion kilowatt-hours of electric energy--almost a 3-fold increase over what was produced by all electric power stations in prerevolutionary Russia. The energy availability for the agricultural labor of 1 worker approximately doubled over the past 15 years and has reached 43 horsepower. Chemization of farming is being conducted with increasing effectiveness.

The average annual productivity of grain crops on the fields of the republic has increased. While before the assimilation of the virgin land, even in the most productive years, Kazakhstan sold the state little more than 100 million poods of grain, during 1954-1981 it delivered to the state 320 million tons or 19.6 billion poods of high-quality grain. Seven times during the years since the assimilation of the virgin land the workers of the republic have poured into the grain bins of the homeland more than 1 billion poods of grain, including 4 times during the years of the 10th Five-Year Plan. And in 1979--the year of the 25th anniversary of the beginning of the assimilation of the virgin and long-fallow land--the Kazakh SSR sold the state 1 billion 262 million poods of grain, for which it was twice awarded the Order of Lenin.

The assignment of the 25th CPSU Congress was successfully fulfilled--to increase the republic's average annual grain production to 25-27 million tons. The actual production of it amounted to 27.5 million tons.

The assimilation of the virgin land had a significant effect on the development of animal husbandry as well--a traditional branch of agriculture for Kazakhstan. The number of head of large horned cattle increased 2.1-fold in 1981 as compared to 1983, sheep and goats--2-fold, and hogs--5.7-fold. In 1940 there were little more than 8 million head of sheep and goats. The number of them has increased considerably. Just during recent years the offspring of sheep and goats amounts to about 17 million head. The productivity of the livestock has increased as have the production and procurements of animal husbandry products. The latter provides more than half of the gross agricultural output of the Kazakh SSR. In terms of the production of animal husbandry products the republic occupies one of the leading places in the country.

Animal husbandry, like other branches of agriculture in Kazakhstan, is being transferred to an industrial basis. In the republic there are now 107 complexes for producing milk and raising and fattening livestock, hundreds of mechanized fattening areas and 43 comprehensively mechanized and automated poultry farms.

All kinds of transportation and communications are developing at rapid rates. The republic no longer has a single large village or aul which is not connected to the rayon and oblast centers by buses and other kinds of transportation. The ever increasing growth rates of productive forces in the republic have required the construction of railroads and highways and the opening of new airlines and waterways.

At the end of 1981 the distance of railroads in operation on the territory of Kazakhstan amounted to 14,300 kilometers, a 7-fold increase over the amount before the revolution. Railroads provide for 87 percent of the cargo turnover and almost 30 percent of the passenger transportation when all kinds of transportation in the republic are taken into account. The distance of general purpose paved highways has reached 72,000 kilometers.

Air transportation is developing exceptionally rapidly. Civil aviation is being intensively equipped with advanced technical equipment. More than 65 percent of the trips are now provided on high-speed and comfortable liners. In 1981 more than 6.6 million passengers were transported on air transportation in the republic.

Because of the rapid development of the petroleum extraction, petroleum processing and gas industry in Kazakhstan and Central Asia, pipeline transportation has become more important. The first pipeline in the Kazakh SSR was the Gur'yev-Orsk main petroleum pipeline which was constructed before the Great Patriotic War. At the present time the largest gas lines in the country pass through the territory of the republic: Bukhara-Ural, Central Asia-Center and Bukhara-Tashkent-Frunze-Alma-Ata; the overall distance of the network of main gas and petroleum pipelines has reached 3,200 kilometers.

During the years of Soviet power the distance of waterways in operation increased 2.5-fold and today exceeds 4,400 kilometers.

The first radio broadcasts began in 1923 and the first television broadcasts, in 1958. Radio is now heard in all corners of the republic and more than four-fifths of the population see television programs. A unified automated system of interurban, urban and rural telephone communications is being created.

During the years of Soviet power the population in Kazakhstan has increased 2.7-fold. While in 1920 the urban population amounted to only 7 percent of the republic's residents, at the end of 1981 it amounted to 56 percent. Of the republic's 82 cities, 62 have been formed in the past 60 years.

Before the revolution more than nine-tenths of the population of Kazakhstan aged 9-49 years were illiterate. According to data of the 1979 all-union census, 81 percent of the workers employed in the national economy had a higher, secondary or incomplete secondary education. In the 1981/82 school year about 4 million people were studying in the general educational schools, the system of occupational and technical education and in higher and secondary specialized training institutions of the republic (in 1920--146,000). In the 1914/15 school year in the schools of Kazakhstan the overall number of students amounted to only 7.5 percent of the Kazakh, while in 1981 it was 49 percent. All kinds of education in the republic has included 6.5 million people, that is, every second resident of the republic seven years of age and older.

In terms of the number of students in higher educational institutions (per 10,000 residents) Kazakhstan outstripped such countries as Italy, Great Britain and the FRG.

Before the revolution on the territory of Kazakhstan there were only 3,319 teachers, and in 1981 in day general education schools of the republic alone there were 182,000 teachers.

In 1928 there were 2,000 children in kindergartens and day nurseries of the republic while in 1981 in more than 7,000 permanent kindergartens, day nursery-kindergartens and day nurseries there were more than 900,000 (317,000 of them in rural locations).

More people in our country read than in any other country in the world. This is clear from the example of Kazakhstan. In 1981 in the republic there were more than 9,500 mass libraries with 100.4 million books (including magazines) (in 1927--only 237 mass libraries with 488,000 books).

The Kazakh SSR publishes 435 republic and local newspapers in the Kazakh, Russian, Uighur, Korean and German languages with 5.3 million copies (including 159 newspapers with 1.9 million copies in the Kazakh language), 100 journals and other periodicals whose annual circulation exceeds 52 million copies.

There are more than 8,900 various club institutions in operation on the territory of Kazakhstan, of which 8,000 are in rural areas (in 1920 there were only 139). The number of movie houses in 1981 amounted to more than 10,700 (in 1940--1,268) and the number of viewers of movie performances--255 million) in 1940--20 million).

The concern of the party and government for the protection of the health of mothers and children is especially great. During the prerevolutionary period the territory of Kazakhstan there was not a single children's hospital and not a single maternity hospital. In 1981 in the republic there were more than 16,000 physician and midwife beds for pregnant women and mothers who are delivering, 55 maternity homes, 1,450 women's consultation offices, children's polyclinics and outpatient hospitals, 65 children's hospitals with polyclinics, and the overall number of beds for children in hospitals exceeded 42,000. In 65 children's sanitoriums of the republic about 25,000 children are treated each year in 8,000 beds; 26,600 children visit permanent day nurseries.

In the Kazakh SSR approximately every 8th (and in rural areas every 4th) family has 4 and more children; 248,000 mothers obtain from the state a monthly stipend for the 4th and each subsequent child, including more than 86,000 mothers who have given birth to and are raising 7 and more children.

On the immense territory of present day Kazakhstan in 1913 there were only 98 hospitals with 1,800 beds, 244 physicians and 393 intermediate medical personnel; for every 10,000 people there were 0.4 doctors, 0.7 intermediate medical workers and 3 hospital beds. In 1981 for every 10,000 residents in the republic there were 32 doctors, 101 intermediate medical personnel workers and 130 hospital beds. According to data from recent publications, for every 10,000 people in the FRG there are 25.9 doctors, the United States--22.5, Italy--19.8, France--15.3, Great Britain--16.4 and Japan--16.2. Thus Kazakhstan, whose residents before the revolution were practically without skilled medical assistance, has now left the most developed capitalist countries far behind in terms of the number of doctors per 10,000 residents.

The republic has formed a large detachment of national working class and engineering and technical intelligentsia. In 1981 the number of workers and employees in the republic's national economy amounted to almost 6.2 million (in prerevolutionary Kazakhstan--75,000).

Great October radically changed the living conditions of the Kazakh people. On the basis of dynamic development of public production there has been a steady improvement of the material well-being of the republic's workers.

During 20 years the volume of national income produced in the Kazakh SSR increased 3.2-fold. The real per capita income in the republic doubled in the past 15 years alone. In 1940 the average monthly monetary earnings of workers and employees in Kazakhstan amounted to 30 rubles, in 1960--82, in 1970--124 and in 1981--170.

The amounts of payments and benefits received by the population of the republic in 1981 from public consumption funds exceeded 6.3 billion rubles, a 5.3-fold increase over 1960; the per capita figures are 416 rubles as compared to 120 rubles in 1960. A family consisting of 4 people in 1980 received more than 1,600 rubles in payments and benefits from public consumption funds.

During 1920-1981 residential buildings with an overall space of 201 million square meters were constructed in Kazakstan, with 23.5 billion rubles spent on their construction, including 20.8 billion rubles by state and cooperative enterprises and organizations (including housing cooperation) and kolkhozes. Approximately 150,000 families move into new housing in the republic each year.

In 1913 the urban housing fund amounted to 2 million square meters, and in 1981--100.9 million square meters. While on an average for 1 urban resident in Kazakhstan in 1913 there were 3.7 square meters, in 1980 this figure is approximately 12 square meters. More than two-thirds of the urban housing fund has been constructed in the past two decades; about 85 percent of the dwelling space of the collective housing fund in the cities and villages of an urban type in the republic have running water, sewerage, central heating and gas, 78 percent have baths or showers, 56 percent have hot water and all of the housing has electricity.

Retail commodity turnover in state and cooperative trade in Kazakhstan amounted to 412 million rubles in 1940, and it reached almost 14 billion rubles in 1981. The overall volume of retail commodity turnover in the republic (in comparable prices) per capita increased more than 9.8-fold during the 41 years.

Indicators of the provision of the population with durable cultural and domestic items also give a clear picture of the improvement of the material well-being of the people. In 1980 in the republic for every 100 families (average) there were 557 clocks of all kinds, 900 radios, 86 television sets, 94 refrigerators, 98 washing machines, 88 sewing machines, 31 cameras, 49 bicycles and mopeds, 31 motorcycles and motor scooters. Every 8th family had its own automobile.

During the past two decades there has been considerable development of consumer service for the population. As compared to 1960 the network of consumer service enterprises has almost tripled. At the present time 720 kinds of consumer services are offered to the population, including 440 in rural areas.

One of the remarkable results of the development of the Kazakh SSR in the family of sister republics is the flourishing of science and culture, which is national in form and socialist in content. While in 1940 there were 1,700 scientific workers in scientific institutions, VUZ's and other institutions and organizations of the republic, in 1981 their number exceeded 38,000; among the scientific workers are 12,700 candidates and doctors of sciences. The Kazakh SSR Academy of Sciences was founded in 1946 and has become one of the largest scientific centers in the eastern part of the country. It has 46 academicians and 82 corresponding members. Scientists of Kazakhstan are developing fundamental problems which are of great national economic significance for the entire country in almost all areas of science and technology. The work of many of them has received international recognition and earned the Lenin and State prizes.

Before the Great October Socialist Revolution in Kazakhstan there was no professional theater and only two Russian theaters were in operation. The Kazakh academic drama theater was organized in 1925 in Kzyl-Orda. During the past 10 years alone the republic has opened 6 new theaters and in 1981 there were 31 professional and 180 people's theaters (ensembles); and there were 55 museums in operation (before the revolution there were 3).

The Kazakh SSR Union of Writers now joins together more than 400 writers, poets and dramatists. Russian, Uighur, German, Dungan, Tatar and Korean writers are also working productively in the republic. Many works of writers and also of composers and artists of Kazakhstan have earned widespread popularity in the country.

An impressive program for the development of the economy and culture was set for the Kazakh SSR by the 26th CPSU Congress.

The Basic Directions for the Economic and Social Development of the USSR During 1981-1985 and the Period Up To 1990 earmark increasing the volume of production of industrial output in Kazakhstan during the 11th Five-Year Plan by 22-25 percent. As before, branches of industry that are of unionwide significance and provide for further development of the national economy will develop at rapid rates: electric power, ferrous metallurgy, machine building, metal processing, and the coal, chemical and petrochemical industries. It is planned to increase the extraction of coal by 1985 to 134 million tons, the output of electric power--to 90-95 billion kilowatt-hours, and the output of prepared rolled ferrous metals--to 5.1-5.3 million tons. There will be a considerable increase in the production of mineral fertilizers and the extraction and initial processing of petroleum.

Large tasks have been set for the development of the agro-industrial complex of Kazakhstan. Under the 11th Five-Year Plan the average annual volume of the gross agricultural output is intended to increase by 11-13 percent.

Today hard work is in process on the expanses of Kazakhstan for implementing the USSR Food Program for the period up to 1990 which was adopted by the May (1982) Plenum of the CPSU Central Committee. It sets the following tasks: to provide for an average annual gross yield of grain under the 11th Five-Year Plan in the amount of 28-29 million tons and under the 12th--30.5-31.5 million tons. The harvest of grain crops, like other agricultural crops, is planned to increase to a considerable degree as a result of increased productivity and further development of irrigation work. During the decade it is intended to put into operation 820,000 hectares of irrigated land and to flood no less than 22 million hectares of pasture in dessert and semidessert regions.

Animal husbandry will be further developed. It will be necessary to increase the number of head of all kinds of livestock, to improve the breed makeup of the livestock and to increase their productivity. During the decade the output of meat from raw material of state resources should increase no less than 1.5-fold, whole milk products--1.4-fold and cheeses--1.5-fold.

During the years of the 11th Five-Year Plan there will be considerable strengthening of the material and technical base of the republic's agriculture. It is planned to do a large amount of work for intensification, deepening of specialization and increased concentration of agricultural production.

There is to be considerable development of all kinds of transportation in the republic.

The Kazakh SSR has taken the path of immense achievements and glorious feats which have brought happiness to the ancient land. This year the republic has been awarded the Order of Lenin for the third time for the succesess of the Kazakh people in economic and cultural construction and in celebration of the 250th anniversary of the voluntary unification of Kazakhstan and the Russian Republic.

Implementing the decisions of the 26th CPSU Congress and the 15th Congress of the Communist Party of Kazakhstan, workers of the republic are approaching the 60th anniversary of the founding of the USSR with great labor successes and under the 11th Five-Year Plan they will multiply the power and glory of their beloved homeland.

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## Tajik SSR

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[Article by I. Kapustin, chief of the Tajik SSR Central Statistical Administration]

[Text] Since the first years of Soviet power our economic and social policy have been arranged in such a way as to raise the former national outskirts of Russia to the level of the center as quickly as possible. And this task has been successfully carried out . . . Backward national outskirts, Comrades, no longer exist!

L. I. Brezhnev

Workers of Tajikistan along with all soviet people are greeting the 60th anniversary of the founding of the USSR in a state of great labor and political enthusiasm.

Because of the victory of Great October, the consistent implementation of the Leninist national policy and the assistance from the peoples of our country, during the years of Soviet power Tajikistan in the fraternal family of soviet nations has achieved successes which under other conditions would have required centuries. The path taken by the Tajik people is clear evidence of the great vital force of the soviet social structure and its great advantages over the capitalist system.

As we know, prerevolutionary Tajikistan was one of the most backward national outskirts of tsarist Russia. The life of the Tajik people was difficult and gloomy in the past. Deprived of their statehood they were subjected to severe social and national oppression and the most intolerable exploitation. On the territory of the present Tajikistan there was essentially no industry in the past with the exception of small cottage enterprises. Agriculture was in a great state of decline. A lack of rights and illiteracy was the lot of the Tajik people who were doomed under the emirate to slow physical destruction.

With the creation of the USSR it is as if history stepped up its pace. From the first days the young republic was rendered inestimable financial, economic and organizational assistance. This made it possible for the young republic to develop industrial, agricultural, cultural-domestic and other construction on an unprecedented scale. Because of the successes that were achieved in capital construction, even in the first five-year plan a material base was created for further development of the republic's national economy.

The Tajik people will never forget the assistance from the brother nations in the creation of industry and mechanized agriculture, in the development of science, education, public health and culture, and in the training of national personnel for all branches of the republic's national economy. Construction materials, industrial and other equipment, tractors, trucks and agricultural equipment came to Tajikistan in a continuous flow from the central, economically developed regions of the Soviet Union. All this helped the Tajik people, who had become master of their country, under the leadership of the communist party, to transform the previously impoverished, backward and ravaged outskirt of tsarist Russia into a comprehensively developed and flourishing republic.

In the accountability report from the Central Committee of the Communist Party of Tajikistan to the 29th Republic Communist Party it was emphasized: "Today we are proud to say that all the wealth of our mountainous area, all that of which we are legitimately proud--is a clear confirmation of the wisdom and the farsightedness of our party's Leninist national policy. This, figuratively speaking, is a kind of materialized hymn of friendship and brotherhood of Soviet peoples."*

On the basis of the immense energy base that has been created during the years of soviet power the republic's immense natural wealth was placed in the service of the people and a diversified socialist industry was developed.

*"Report of the Central Committee to the 29th Congress of the Communist Party of Tajikistan," p 48.

Now the industry of Tajikistan in just one day produces 2.2 times as much industrial output as was produced in 1924 during a whole year.

A number of large hydro- and thermoelectric power stations have been created: the cascade of the Varzobskaya GES, the Kayrakkumskaya GES "Druzhba narodov" in the north of the republic, the Perepadnaya, Central'naya and Golovnaya GES's on the Vakhsh canal in the south of the republic, the Dushanbinskaya and Yavanskaya TETs's, and the unique Nurekskaya GES, the largest in Central Asia, with a capacity of 2.7 million kilowatts, a filled dam with a height of 300 meters and a water reservoir with 10.5 billion cubic meters which the entire country helped to construct. Last year it produced 13.5 billion kilowatt-hours of electric power, a 6.6-fold increase over all the period of prerevolutionary Russia.

Branches of industry that determine scientific and technical progress were developed rapidly: electric energy, the chemical and petrochemical industry, machine building and metal processing.

On the basis of the Nurekskaya GES, which is the energy heart of the republic, the Southern Tajik Territorial Production Complex was formed, which is very important for the acceleration of the utilization of natural resources and the growth of the economy not only of the republic, but also of the entire country. A number of facilities have already been constructed and are producing products. They have been constructed taking into account the latest achievements of domestic and foreign technology and they are the pride of the republic. Among them is the Tajik aluminum plant which after completion of construction will be one of the largest in the country, the Yavan electrochemical plant, the procelain plant in the city of Tursun-Zad and others. In the southern zone of Tajikistan and also in other regions large enterprises have been constructed and are already producing consumer goods, processing agricultural raw material and producing construction materials.

As a result, the republic, where previously extremely backward agrarian relations held complete sway, became an area of developed modern industry. The products produced by industry are: automated winders for the textile industry, technological equipment for trade and public catering, primary aluminum, products of the electrical equipment industry, iron bolts, cotton fiber, carpets, canned fruits and vegetables. These are known not only in the Soviet Union, but also far beyond its borders.

Along with the republic's development, the working class took form, became stronger and became tempered. It has mastered complicated engineering and technical occupations and become the organizer of modern industrial production.

Radical changes have taken place in agriculture. Because of the implementation of Lenin's cooperative plan, it has been transformed into a large socialist industry which is based on the application of modern technical equipment and the achievements of science and advanced practice.

In Soviet Tajikistan, instead of hundreds of thousands of small individual peasant farms, large modern collective farms have been created. At the present time the republic has 158 kolkhozes, 255 sovkhozes and 59 interfarm agricultural

enterprises and organizations (not including construction organizations), in which by the end of 1981 there were 33,000 tractors, more than 19,000 trucks, more than 4,000 cotton harvesting machines and a good deal of other agricultural equipment.

Agricultural workers, well aware that the country needs cotton, have done everything possible to increase its production.

One of the powerful means of intensifying agriculture in Tajikistan, and particularly cotton growing, as in other republics of Central Asia, is land reclamation. Carrying out the instructions of V. I. Lenin to the effect that "Irrigation is most of all necessary and will do the most to recreate the area, renew it, bury the past, and strengthen the changeover to socialism,"* the communist party and the Soviet state have done an immense amount of work to develop irrigation in the republic. In 1930-1938 water management construction was developed on a broad front. In 1931 they began construction of a powerful irrigation system in the Vakhsh valley where natural conditions are suitable for cultivating the most valuable fine-fibered strains of cotton. This was of immense significance in ensuring that the country would be independent from other states in providing cotton.

Vakhshstroy became a most important element in the practical implementation of Lenin's national policy of the communist party for the construction of socialism in Tajikistan. In terms of its economic and political significance, Vakhshstroy was on a level with the largest shock construction projects such as Dneproges, the Stalingrad and Chelyabinsk tractor plants, Magnitogorskstroy, Kuzbasstroy, Turksib and others.

Such systems had never been created in the country. This was an outstanding experiment concerning the scientific and practical capabilities of soviet hydraulic engineers. The most eminent specialists of the West did not believe that it could be done. The American irrigation expert Ludwell Gordon, having become familiar with the plan for the construction of the Vakhsh irrigation system, was puzzled. His words were directed to the soviet irrigation engineeers and actually to our society: "You're great dreamers, you are talented fantasizers! I have seen the gold prospectors of California and I know the inventors of the primus stoves who dreamed of becoming Edisons, I have spoken with Herbert Wells--an attractive novelist of our time. They, my friends, have bold and frightening plans. But what you have thought up in Vakhsh is a whole head above that. I assert that mankind does not know of such work under similar conditions. Excuse me, but it seems to be that it is impossible . . ." (the newspaper PRAVDA VOSTOKA of 1 December 1981).

This is what specialists who worked on this construction project predicted. But life and soviet reality refuted the doubts of the American specialists.

With the help of all brother nations of our country, the Vakhsh irrigation system was created in a short period of time, which made it possible to provide life-giving mositure to earth that had been scorched for centuries. The Vakhsh valley was transformed into the pearl of Tajikistan, the main base of the Soviet Union for producing the most valuable fine-fibered strains of cotton.

*Lenin, V. I., "Poln. sobr. soch." /Collected Works/, Vol 43, p 200.

The irrigation construction considerably raised the economy and culture of the Tajik people, and improved the material well-being of the population, above all the kolkhoz peasantry. Other irrigation systems and canals, large water reservoirs and powerful pumping stations were also constructed and reconstructed, which considerably expanded irrigation farming and crop assimilation of many dozens of hectares of untouched virgin land. In 1981 the area of irrigated agricultural land in Tajikistan had increased 3-fold as compared to prerevolutionary 1913, the areas planted in cotton--11.4-fold, the gross yield--29-fold and the productivity of the cotton 2.5-fold.

As a result of the immense transformations that have taken place in agriculture, Soviet Tajikistan has become a republic of advanced socialist farming, one of the large bases in the Soviet Union for producing raw cotton. In 1981 it sold the state 929,400 tons of cotton and in 1980--more than 1 million tons.

The implementation of the party's agrarian policy has contributed to the advancement of other branches of farming and also animal husbandry. Large successes have been achieved in expanding planted areas, increasing productivity and increasing the gross yields of vegetables, potatoes, fruits, grapes and other crops, increasing the number of head of livestock, increasing its productivity and increasing the production and procurements of animal husbandry products.

Great October opened up the door to knowledge and culture for Tajiks and all other peoples of our country, and created conditions for their spiritual and creative growth. In Tajikistan, whose population was almost completely illiterate on the eve of Great October (according to the 1897 census only 2.3 percent of people of the age 9 to 49 were literate and among women--0.3 percent), there are now 3,065 general educational schools, 38 secondary specialized training institutions and 10 higher educational institutions in which 1 million 193 thousand people are studying. Hundreds of Tajik boys and girls are studying in higher educational institutions of Moscow, Leningrad, Kiev, Kharkov, Odessa, Tashkent and other cities of the Soviet Union. As of 1 January 1982 in 76 vocational and technical training institutions in the state occupational training system there were 36,000 people learning occupations. Moreover, in 1981 310,000 people learned new occupations and increased their skills at enterprises, institutions, organizations and kolkhozes.

There are now 249,000 specialists with higher and secondary specialized education working in the national economy of Tajikistan.

Colossal successes have been achieved in public health. While in 1913 on the territory of present day Tajikistan there was only 1 hospital with 40 beds, 19 physicians and 32 medical assistants, at the present time there are 291 hospitals with 41,800 beds, 10,000 physicians of all specialties and 27,000 medical assistants. In terms of the number of physicians for the population Tajikistan surpasses such developed countries as England and Japan 1.3-fold. During the years of Soviet power, as a result of the steady rise in the material and cultural level of the life of the people, the creation of a broad network of medical institutions, the provision of free skilled medical assistance for the population, the successful development of medical science and the extensive spreading of physical culture and sports, the health of the

population of the republic has improved considerably, and illness and the overall death rate have been reduced. We have eliminated such dangerous mass diseases as cholera, plague, smallpox, malaria and others that destroyed thousands of human lives.

A great event in the republic's cultural life was the opening of the Tajik SSR Academy of Sciences in 1951, which presently employs 1,319 scientific workers, of whom 612 are doctors and candidates of sciences, and in the republic national economy as a whole there are 7,700 scientific workers, of whom 2,800 are doctors and candidates of sciences. Scientists of Tajikistan are solving complicated scientific problems and helping to better utilize the natural wealth of this mountainous region.

The concern of the party and government for raising the cultural level of the workers of Tajikistan is clearly reflected in the development of literature, art, radio and television and the growth of the network of cultural and educational institutions: houses of culture, clubs, movie theaters, libraries, movie installations, drama theaters and museums, and the development of the press and publishing work. In a region where before the victory of Great October there was no press agency or film production, there are now 8 republic, 7 oblast and 41 city and rayon newspapers, and 18 magazines with an overall circulation of 1 million 795 thousand. Large quantities of political, artistic and scientific literature are published in the Russian, Tajik and other languages.

One of the greatest accomplishments of soviet power is the liberation of Tajik women. They have obtained the right to a free and joyous life and have entered into political, social and state work. Now there is essentially not a single branch of the national economy where women are not active participants. Among specialists with higher and secondary specialized educations employed in the national economy (as of 14 November 1980) women comprise 42 percent, and among scientific workers--40 percent. More than 700 women have the scientific degree of doctor and candidate of sciences. Women comprise 39 percent of the workers and employees and 52 percent of the physicians. There are 139 women who are deputies of the USSR Supreme Soviet and the Tajik SSR Supreme Soviet, more than 13,216 are deputies of local soviets, 88 are Heroes of Socialist Labor, and 17,802 have been awarded orders and medals of the Soviet Union.

The impressive changes that have taken place during the years of soviet power on the ancient Tajik land are clearly visible from the example of the capital of Tajikistan, the city of Dushanbe, which has grown up on the spot of the former kishlak of Dyushanbe where in 1924, as the old residents recall, there were only 100 residents and the only lighting in the streets was one kerosene lamp. Now this garden city is the largest scientific and cultural center of Central Asia in which more than a half million people live. The capital has 100 industrial associations and enterprises, the Academy of Sciences, and 8 higher educational institutions, among them the Tajik State University imeni V. I. Lenin, 13 secondary specialized training institutions, 117 general educational schools, 101 mass libraries, 4 professional theaters, among them the opera theater and the Ballet imeni S. Ayna, the state circus, 56 club institutions, 6 museums and many other cultural and educational institutions. Representatives of more than 70 nations and nationalities live and work harmoniously here.

The standard of living of the republic's workers has risen during the years of Soviet power: real incomes and the consumer capacity of the population are increasing, earnings and benefits from public consumption funds, deposits in savings banks and expenditures on national education and public health are increasing, and housing and cultural-domestic construction is increasing.

The basis of these achievements is the stable, inviolable friendship of all peoples in our country. Representatives of almost 100 nationalities live and work in the republic and make their contribution to multiplying the successes of Soviet Tajikistan.

The impressive changes that have taken place in the lives of the workers of Tajikistan during the years of Soviet power are convincing evidence of the great advantages of socialism over capitalism and the immense and inestimable assistance of all fraternal nations of our country, above all the great Russian nation, which are joined together into a single, friendly multinational family --the Union of Soviet Socialist Republics.

During the 10th Five-Year Plan Tajikistan, like the entire country, has significantly advanced in all areas of economic and social development, its economic potential has increased, fixed production capital has been expanded and updated, its structure has been improved, and the efficiency of public production and the material well-being of the republic's workers have increased. The leading branch of the economy--the republic's industry--has developed at rapid rates. Planned assignments for the sale of products and the growth of labor productivity set for the years of the 10th Five-Year Plan were fulfilled ahead of schedule. More than 296 million rubles' worth of industrial products were sold in excess of the plan. The volume of industrial production increased by 30 percent and the amount of industrial output was 3.8 billion rubles greater than under the preceding five-year plan. Branches that determine scientific and technical progress developed at more rapid rates in the republic: electric energy, the chemical and petrochemcial industry, machine building and metal processing.

A large amount of work has been done to raise the technical level of production and improve product quality. In keeping with the plan for the development of science and technology, during the years of the 10th Five-Year Plan more than 2,000 measures were introduced to improve the technical level of production. More than 400 mechanized flow lines and automated lines were put into operation in production associations and industrial enterprises, 216 shops and sections were changed over to comprehensive mechanization and automation, 7,000 units of highly productive new technical equipment, aggregates and means of transportation were installed, and more than 6,700 units of existing equipment were modernized. The production of about 100 new kinds of products and 300 technological processes were assimilated. Raising the technical level of production on the basis of the achievements of science and technology provided for saving the labor of 23,000 people in the national economy under the 10th Five-Year Plan. The additional profit from the introduction of new technical equipment (per year) amounted to 58.7 million rubles. The output of products with the Emblem of Quality increased more than 8-fold during the years of the 10th Five-Year Plan.

There was further development of transportation, communications and other branches of the republic's national economy.

Consistently implementing the party's agrarian policy and the decisions of the 25th Party Congress, the July (1978) Plenum of the CPSU Central Committee, subsequent Plenums of the CPSU Central Committee and the instructions of General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet, Comrade L. I. Brezhnev regarding questions of the agrarian policy, and relying on the increased material and technical base, agricultural workers achieved a considerable increase in the production and procurements of agricultural products under the 10th Five-Year Plan. The gross agricultural output that was produced was 1.1 billion rubles more than in the preceding five years. The average annual volume of gross agricultural output increased as compared to the preceding five-year plan by 19 percent, with a plan for 16 percent. Plans for the production of raw cotton were considerably overfulfilled. The country received 4 million 531 tons of cotton --479,000 tons more than in the preceding five years.

The number of head and the productivity of all kinds of livestock and poultry have increased. Five-year plans have been successfully fulfilled for the production and procurements of grain, vegetables, potatoes, melon crops, citrus fruits, geraniums, milk, wool, silkworm cocoons, sheepskins and grapes. The average annual grain procurements increased by 21 percent as compared to the 9th Five-Year Plan, potatoes--64 percent, vegetables--60 percent, melon crops --41 percent, fruits--27 percent, grapes--64 percent, tobacco--26 percent, geraniums--22 percent, cattle and poultry--25 percent, milk--50 percent and eggs--71 percent. This was achieved as a result of further strengthening of the material and technical base of agriculture, concentration and specialization of agricultural production, and the introduction of the achievements of science and advanced practice.

More than 4.7 billion rubles were invested in the national economy under the 10th Five-Year Plan, which is 22 percent more than under the 9th Five-Year Plan. More than 80 large enterprises and shops were put into operation and the formation of the Southern Tajik Territorial Production Complex was continued. With the startup of 6 hydro-aggregates of the Nurekskaya GES, the energy giant on the Vakhsh reached its full capacity a year ahead of the deadline for installation. Large capacities of the Tajik aluminum and Yavan electrochemical plant and other important facilities were put into operation.

Investments in agriculture amounted to 1.6 billion rubles, or 33 percent of the overall volume of capital investments in the republic's national economy. More than 57,000 hectares of newly irrigated land were put into operation and we constructed animal husbandry facilities for maintaining 8,400 head of large horned cattle on the Khovaling experimental agro-industrial association, the Tadzhikskiy experimental animal husbandry complex for raising and fattening 10,000 head of young large horned cattle in Ordzhonikidzeabadskiy Rayon, facilities for fattening 24,000 head of hogs on the Novobad sovkhoz in Kuybyshevskiy Rayon, facilities for fattening 12,000 head at the Mekhnatabad in Kommunisticheskiy Rayon and others.

Under the past five-year plan fixed production capital increased 1.4-fold and at the end of the five-year plan amounted to more than 8 billion rubles; in industry it increased 1.6-fold and in agriculture, construction and transportation--1.3-fold.

Appreciable progress has been made in the implementation of the social program. During the five years 3.6 billion rubles more were invested in improving the well-being of the people than under the 9th Five-Year Plan. The national income increased by 26.6 percent. Under the 10th Five-Year Plan workers of the republic received payments and benefits from public consumption funds in the amount of 1.6 billion rubles more than under the 9th Five-Year Plan. During these years these payments increased by 32.9 percent. Expenditures on education increased by 108.1 million rubles (33.6 percent), public health and physical culture--45.0 million rubles (36.6 percent) and social security--93.7 million rubles (30.7 percent).

The real per capita incomes increased during this time by 11.6 percent, the average monthly monetary earnings of workers and employees--by 6.8 percent, and the wages of workers on public kolkhozes--37.1 percent. Assignments of the 10th Five-Year Plan for retail commodity turnover and also the plans set for the sale of consumer services were fulfilled ahead of schedule.

More dwelling space, schools, hospitals and trade and consumer service enterprises were put into operation than ever before. Every 6th resident of the republic improved his living conditions.

There was further development of education, public health, science, culture and art. During the years of the 10th Five-Year Plan 399,700 people received secondary education, a 1.6-fold increase over the years of the 9th Five-Year Plan. The number of physicians increased from 7,200 in 1975 to 9,900 in 1981. During the years of the 10th Five-Year Plan the population of the republic increased by 516,000. The educational level of the population rose.

Even greater prospects are opened up for Tajikistan under the 11th Five-Year Plan. These are earmarked in the decisions of the 26th CPSU Congress and the Basic Directions for the Economic and Social Development of the USSR During 1981-1985 and the Period Up to 1990.

The 11th Five-Year Plan will be an important new stage in the further development of Tajikistan. Industrial output is to increase by 27 percent in the republic during the five-year period. The construction of facilities of the Southern Tajik Territorial Production Complex will continue and basically all the facilities of the Tajik aluminum plant and new capacities at the Yavan electrochemical plant will be constructed. There will be further development of the energy network--it is intended to put the first aggregates of the Baypazinskaya GES into operation, as a result of which water resources of the Vakhsh River will be utilized more efficiently. This is of colossal significance for the entire southern agricultural zone of the republic. Construction will be continued on the extremely large Rogunskaya GES whose capacity is 3.6 million kilowatts. It is intended to increase the output of electric energy to 16 billion kilowatt-hours.

Other basic branches of industry will also develop at rapid rates--the mining, metallurgical and chemical industries and machine building.

In the five-year plan a great deal of attention is devoted to increasing the production of consumer goods, with the increase amounting to 30 percent in the republic. It is intended to carry out technical re-equipment of the cotton fabric combine in Dushanbe and the silk combine in Leninabad, and to increase the production of cotton fabrics 1.3-fold and canned fruits and vegetables--1.2-fold. A task is also being set to essentially improve the quality of these items.

The average annual volume of gross agricultural output is to increase by 12 percent; more than 50,000-55,000 hectares of land are to be irrigated; and the assimilation of the Dangarinskaya steppe is to continue. Work will be done for further concentration and specialization of the branches of agricultural production and for its transfer to an industrial basis. All this will make it possible to increase the production of all kinds of crop growing and animal husbandry products and to improve the supply of raw material for industry and food products for the population.

There will be further development of transportation, communications, trade, consumer services and other branches of the republic's national economy during the five-year plan. On the basis of the advancement of the economy and increased efficiency of public production, there will be further improvement in the public well-being.

Workers of the republic, inspired by their great prospects, have confidentally taken on the fulfillment of the assignments of the 11th Five-Year Plan. Industrial workers significantly overfulfilled the socialist commitments adopted for 1981 for the volume of production and sales of industrial products. Agricultural workers overfulfilled the 1981 plan and socialist commitments for the production and procurements of all the main products of farming and animal husbandry. They harvested 929,400 tons of raw cotton, 25,400 tons more than established by the plan and 14,400 tons more than were established by socialist commitments. The number of head of all kinds of livestock and poultry increased as did the average weight of 1 head of large horned cattle, hogs, sheep and goats that were sold to the state. Farmers overfulfilled the state plans and socialist commitments for the sale to the state of grain, potatoes, vegetables, fruits, grapes, melon crops, citrus fruits, geraniums, cattle and poultry, milk, eggs, wool and silkworm cocoons.

More residential buildings, general educational schools, polyclinics, children's preschool institutions and vocational and technical schools were put into operation than in 1980. Capacities at the Yavan electrochemical plant were put into operation and work was carried out at accelerated rates at the Rogunskaya and Baypazinskaya GES's. Plants were also put into operation: a porcelain plant in Tursunzade, a mineral water plant in Dushanbe and a number of other important national economic facilities. New irrigated land amounting to 12,700 hectares and animal husbandry faciltiies, including animal husbandry complexes for maintaining livestock, were put into operation in agriculture in 1981. A considerable amount of work was done to expand and reconstruct existing enterprises.

Socialist commitments for trade and consumer services were successfully fulfilled. An important step was taken in implementing the social program. Payments and benefits to the population from public consumption funds increased by 65 million rubles in 1981 and exceeded 1.2 billion rubles. Retail commodity turnover in state and cooperative trade increased by 140 million rubles in comparable prices. Through all sources of financing more than 20,000 new apartments were constructed with an overall area of 1.1 million square meters, and 133,000 people obtained new apartments or improved their living conditions.

The USSR Food Program for the period up to 1990, adopted at the May (1982) Plenum of the CPSU Central Committee, has set large and complicated tasks for the republic.

It is intended to provide for an average annual production of meat (in slaughtered weight) under the 11th Five-Year Plan in the quantity of 110,000 tons, and under the 12th Five-Year Plan--130,000-140,000 tons, milk--520,000 and 580,000-600,000 tons, respectively, grain--315,00 tons and 320,000-340,000 tons, respectively, and to increase the production of vegetables, melon crops and grapes during the 10-year period no less than 2-fold, fruits and berries --1.5-fold and all kinds of feeds--1.5-1.6-fold.

An area of 100,000-110,000 hectares will be irrigated.

Branches that process agricultural products will develop at rapid rates.

For the achievement of good results in the all-union socialist competition and successful fulfillment of the State Plan for the Economic and Social Development of the USSR in 1981, the Tajik SSR was awarded the Challenge Red Banner of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee. The same high award of the homeland and also Challenge Red Banners of the Central Committee of the Communist Party of Tajikistan, the Council of Ministers of the Tajik SSR, the Tajik Council of Trade Unions and the Central Committee of the Tajik Komsomol were also awarded to Kulyab and Kurgan-Tyube Oblasts and a number of cities, rayons and collectives of enterprises, organizations, kolkhozes and sovkhozes of the republic.

Workers of Tajikistan owe their happy life and their even more beautiful future to the wise Leninist national policy, the unselfish friendship, the close cooperation and the mutual assistance of all nations and nationalities of our multinational homeland and the wise leadership of the Communist Party and its Central Committee.

Everywhere in the republic socialist competition is now developing increasingly extensively for a worthy greeting to the glorious anniversary--the 60th anniversary of the day of the founding of the Union of Soviet Socialist Republics under the motto "Shock Labor for the Anniversary Year." Workers of the republic are doing everything possible to successfully fulfill the tasks facing the republic in the second year of the 11th Five-Year Plan and the socialist commitments that were adopted for this year.

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# Armenian SSR

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/Article by S. Mutafyan, chief of the Armenian SSR Central Statistical Administration/

/Text/ Soviet Armenia, in the unified family of the multinational Soviet state, has become in the shortest historical period a republic of powerful industry, modern, highly developed agriculture, advanced science and high culture--a remarkable example of the life-giving creative force of the ideas of Marxism-Leninism, scientific socialism and friendship and brotherhood of peoples.

K. S. Demirchyan

The October Revolution put an end forever to the class and national oppression in our country, radically changed the destinies of the working masses, nations and nationalities that populate it, brought them complete social and national liberation, and placed them on the broad path of historical creation, solidarity mutual assistance, international unity and friendship, free labor and flourishing.

The Armenian Soviet Socialist Republic was formed on 29 November 1920 and on 30 December 1922, as part of the Transcaucasion Federation, entered the USSR. The formation of the USSR became one of the main factors that made it possible to provide for the restructuring of the society on a socialist basis and to advance economy and culture rapidly in all union republics.

During the years of Soviet power Armenia has been transformed from a backward outskirt of tsarist Russia into an industrial-agrarian socialist republic in the unified family of the multinational Soviet state. Because of the practical implementation of the Leninist national policy and the self-sacrificing labor of the heroic working class, the kolkhoz peasantry and the labor intelligentsia, with the help of the brother nations of our country and above all the Russian nation, the Armenian SSR has achieved immense successes in the development of the economy, science and culture and has raised the standard of living of the peoples.

The republic occupies the northeastern part of the Armenian plateau which is framed by the northern and eastern mountain ranges of the Lesser Caucasus. Its territory is 29,800 square kilometers and the average elevation is 1,870 meters above sea level. Because of the strongly indented mountain relief a considerable part of the land is unsuitable for agriculture. Plowed land amounts to only 481,000 hectares and pastureland--648,900 hectares. The Armenian plateau is one of the centers of the origin of human civilization, the cradle of the Armenian people and their state. Having appeared on the historical arena in deep antiquity, the Armenian people made a significant contribution to the development of world civilization through their statehood and material and spiritual culture.

For centuries foreign invaders ravished the ancient Armenian lands. Throughout the entire pre-October history of Armenia there is a continuous chain of wars and national conflicts which drove the people into an abyss of poverty and suffering. On the verge of physical destruction, the Armenian people inherited from the past a backward economy and extremely neglected agriculture. Industry amounted only to the working of copper mines, enterprises for initial processing of agricultural raw material and semi-amateur cottage industry. In 1920 the population amounted to only 720,000. More than 84 percent of the population aged 9-49 years were illiterate.

By the time of the establishment of Soviet power in Armenia there were 383 general educational schools with 37,000 students and 3 secondary specialized training institutions with 300 students. There was an insignificant network of cultural and educational institutions. The medical service for the population was extremely poor. In 1920 there were only 77 physicians and 393 hospital beds.

The Armenian people will never forget that before the formation of the USSR, Soviet Russia and other sister republics (particularly the Ukraine and Azerbaijan) did everything possible so that the workers of Armenia would be able to break out of the clutches of ruin and hunger and develop socialist construction on a broad front and begin to raise the economy and culture on a new basis.

After Armenia entered the Union of Soviet Socialist Republics its economy and culture began to develop as a part of the country's unified national economic complex.

New socialist social relations brought to life a kind of internal forces hidden in the people which could not be dreamed of previously. Carrying out the immense plans for socialist construction, the Armenian people have achieved great successes in economic and cultural construction. Within less than 10 years the destroyed economy was restored and within another decade the once agrarian Armenia was transformed into a republic whose industrial output increased almost 9-fold as compared to 1913.

New branches of industry began to be created, particularly the chemical, electrical equipment, machine building and others. Large new industrial enterprises appeared, the number of workers and employees increased sharply and a modern working class and national intelligentsia were formed.

The growth rates of industrial output were unprecedentedly rapid in 1920-1940, reaching an average of 19 percent per year. While the growth rates of industry constantly outstripped the growth rates of other branches of the national economy, in industry itself the production of means of production (group A) developed most rapidly. The proportion of group A in the overall volume of industrial output also increased considerably.

Even at the dawn of Soviet power V. I. Lenin emphasized that our country can be transformed into a socialist country only through complete electrification. Armenia, which has no industrial supplies of fossil fuel, had to increase its

energy capacities through the construction of hydroelectric stations. As early as 1926 the Yerevanskaya GES was put into operation. In 1940 the production of electric power in the republic increased more than 78-fold as compared to 1913. The output of electric power in 1981 exceeded 14 billion kilowatt-hours--one of the highest per capita indicators in the country. Here it should be noted that hydroelectric power stations, particularly the Razdanskiy cascade, have served as a basis for the practical achievement of complete electrification in the republic. This contributed to the development of such energy-intensive industries as electrolysis of aluminum and copper and the production of calcium carbide.

Minerals and many kinds of natural construction materials began to be used in a new way, and local raw material was used to develop light industry, the food industry, nonferrous metallurgy and others.

During the years of Soviet power Armenia created a large agricultural production which is based on the utilization of the achievements of modern science and technology. In 1940 the republic already had 1,030 kolkhozes and 14 sovkhozes. With a 1.3-fold increase in the planted areas as compared to 1913, the gross agrciultural output increased 1.6-fold during this same period.

The creation of collective farms contributed to the strengthening of the material and technical base, the technical reconstruction of all agricultural production, the increase in the energy availability for labor and the rise in the level of mechanization of the basic agricultural work. By 1940 there were about 2,000 tractors and grain harvesting combines in agriculture and more than 60 percent of the kolkhozes and sovkhozes of the republic had electricity.

The rapid advancement of the socialist economy in the Armenian SSR is supported by large capital investments in all branches of the national economy, which during the years of the pre-war five-year plans amounted to more than 396 million rubles. We constructed and put into operation 46 new industrial enterprises such as the Yerevan synthetic rubber plant, the Kirovakan chemical plant imeni Myasnikyan, the Leninakan textile combine, the Anipemza combine, Armmramor, the Yerevan oil and fat combine and others. Enterprises of the copper mining industry in the cities of Alaverdi and Kafan were reconstructed and equipped with new technical equipment.

Thus as a result of the constant concern of the party and government from five-year plan to five-year plan, the image of the ancient Armenian land changed and even by 1940, by all historical measures, unprecedented economic growth had been achieved.

The peaceful labor of the soviet people was interrupted by the terrible attack by fascist Germany. During the difficult years of the Great Patriotic War the Armenian people along with the brother nations of the entire country rose up in defense of the Soviet homeland. Armenia too made its contribution to the victory over the enemy. Having rapidly changed over to wartime production, it gave the front various kinds of weapons and ammunition. "My acquaintance with the Armenian people began during the days of the Great Patriotic War," said L. I. Brezhnev. ". . . and then, during the days of the terrible battle

I came to know the beautiful soul of the Armenian people."* The sons and daughters of the Armenian people fought worthily against the enemy and displayed courage and heroism. More than 70,000 Armenian military men were awarded military orders and medals for courage and bravery, more than 100 became Heroes of the Soviet Union, and more than 50 became marshals, admirals and generals.

After the victorious end of the Great Patriotic War, having restored the destroyed economy in a short period of time, the Soviet Union multiplied its economic potential, as a result of which there was accelerated growth of industrial production and prerequisites were created for implementing a scientifically substantiated, long-term socio-economic program for harmonious and proportional development of all branches of the national economy. Large changes took place in the economy of the Armenian SSR as well. Evidence of the unwavering concern of the party and government for the development of the Armenian economy is the historical decree of the CPSU Central Committee and the USSR Council of Ministers, "On Measures for Further Developing the National Economy of the Armenian SSR," which predetermined the direction of the republic's development and marked a new stage in the development of its productive forces.**

The industry of the Armenian SSR has developed rapidly. This is characterized both by high rates of growth of the volumes of production and by structural changes. The volume of industrial output in 1981 had increased 48-fold as compared to 1940, including: the production of electric energy--36-fold, the output of products of the construction materials industry--88-fold, the chemical and petrochemical industry--130-fold, machine building and metal processing--819-fold, light industry--29.5-fold, and the food industry--10-fold.

The industrial image of Armenia includes hundreds of technically equipped associations and industrial enterprises with a modern level of technology and organization of administration and the art of production, which produce a multitude of complicated and high-quality products. Machine building and metal processing, the electronic and radio industry, instrument building, precision machine tool building with numerical program devices, the automotive industry and other branches of industry have developed at extremely rapid rates. Under the 10th Five-Year Plan the production volume from machine building and metal processing as a whole increased by 74 percent, and its proportion in the overall volume of industrial production amounted to 28 percent. The average annual rates of increase in the volume of production in branches of group B during 1971-1981 amounted to 8.3 percent. The assortment is constantly being updated, the consumers' qualities are being improved and the commercial appearance of the products is being improved. The volume of production of products of the highest quality category under the 10th Five-Year Plan increased more than 4-fold, and the proportion of products with the Emblem of Quality in 1981 amounted to 19.6 percent. Branches that produce consumer goods are developing successfully in the republic, and their production in 1981 had increased 28-fold as compared to 1940.

*Brezhnev, L. I., "Leninskim kursom" [A Leninist Course], Vol 3, p 186.
**Demirchyan, K. S., "Sovetskaya Armeniya" [Soviet Armenia], Moscow, Politizdat, 1980, p 26.

It was noted at the 26th CPSU Congress that the Communist Party of Armenia was able to direct labor collectives and all units of administration and planning toward improving the quality of industrial products. And at the November (1981) Plenum of the CPSU Central Committee the Yerevan Order of the Labor Red Banner Masis footware production association was named among the leading enterprises that produce high-quality products. This is not the only example. The republic has many enterprises that produce more than 70 percent of their items with the pentagon of honor. And in Kirovakan almost half of the industrial products are produced with the Emblem of Quality.

Unionwide division of labor and the economic cooperation of all union republics play a large role in the economic development of Soviet Armenia. Armenia now delivers to other republics modern electronic computer equipment, alternating current generators, electric engines, transformers, cables and wire, welding equipment, pumps, compressors, metal processing machine tools, motor vehicles and motorized loaders, various kinds of instruments, tires, construction materials and products of the chemical industry. Items of the footware, textile and rug weaving industry, mineral waters, canned goods, cheeses and other kinds of products from light industry and the food industry are in great demand.

At the same time Armenia receives from other union republics high-voltage equipment, power transformers, large-capacity generators, bulldozers, trucks, tractors, agricultural equipment, commercial wood, timber materials, glass and so forth. Products from the Armenian SSR are exported to many countries of the world. Important in the exported products are synthetic rubber, electronic computer equipment, transformers, metal cutting machine tools, various instruments, trucks, tires, rugs, cognac, wine and so forth.

The achievements of scientific and technical progress and the growth of the capital and electric power availability for labor contribute to the rapid development of industry. Fixed production capital of the national economy at the present time amounts to 9.8 billion rubles, of which 4.9 billion rubles are in industry. During the past five-year plan alone scientific and planning-design organizations in conjunction with industrial enterprises created more than 300 models of new types of machines, equipment, devices and instruments. The enterprises have assimilated the production of 1,013 new kinds of industrial products, of which 525 are machine building items. As of 1 July 1981 enterprises of the republic had 1,826 mechanized flow lines and automated lines, and 658 comprehensively mechanized and automated sections and shops. During the 10th Five-Year Plan as a whole industrial enterprises introduced 29,200 measures in all areas of technical progress. In production 94,300 efficiency proposals and inventions were used, whose economic effect amounted to 246.2 million rubles.

Scientific and technical progress and advancement of the art of production and the skills of workers contributed to the continuous increase in labor productivity in industry, which in 1981 had increased almost 7-fold as compared to 1940. Under the 10th Five-Year Plan as a result of increased labor productivity alone, the amount of labor that was saved was equal to that of 68,000 people.

Transformed on a socialist basis, relying on a modern material and technical base, the republic is constantly preceding on the path of intensification of agriculture. Especially large changes have taken place in this branch since the March (1965) Plenum of the CPSU Central Committee, as a result of which a course was taken toward consolidation of small farms and transformation of some of the kolkhozes and sovkhozes. At the present time the republic has 280 kolkhozes and 476 sovkhozes.

Large successes have been achieved during the past 10 years in all branches of Armenian agricultural production on the basis of further intensification, specialization and concentration of production and the acceleration of scientific and technical progress. Fixed production capital in agriculture has increased significantly. As of 1 January 1981 it amounted to 1.8 billion rubles and the capital availability per 100 hectares of agricultural land was 100,900 rubles. During the years of the 10th Five Year Plan alone capital investments in the entire agricultural complex amounted to 1.2 billion rubles, which is 32.7 percent more than under the 9th Five-Year Plan.

The decree of the CPSU Central Committee and the USSR Council of Ministers, "On Measures for Further Developing and Increasing the Effectiveness of Irrigation Farming in the Armenian SSR," was of historic significance for the development of Armenian agriculture. Under the 10th Five-Year Plan 307 million rubles' worth of capital investments were used for these purposes, which is 44 percent more than during the preceding five-year plan. As a result of the measures that have been taken the area of irrigated land in 1981 amounted to 297,000 hectares, a 17 percent increase over 1965. It is also intended to construct large water reservoirs and to expand the irrigated area considerably.

The strengthening of the material and technical base contributed largely to the intensification of agriculture. The fleet of tractors, grain harvesting combines and cargo trucks was augmented significantly during 1981. Agricultural equipment was also improved.

A decisive direction in the development of agriculture and the strengthening of its material and technical base was the planned and purposive deepening of specialization and concentration on the basis of interfarm cooperation, which made it possible to achieve further growth of agricultural production.

The average annual volume of gross agricultural output under the 10th Five-Year Plan increased by 24 percent as compared to the 9th. The average annual yield of grain during the 10th Five-Year Plan as compared to the preceding one increased by 11.2 percent, tobacco--by 16 percent, sugar beets--by 31.9 percent, vegetables--by 34.8 percent, potatoes--by 17.7 percent, grapes--by 30.8 percent, fruits--by 38.8 percent, meat--by 28.7 percent, milk--by 17.6 percent, eggs--by 36.6 percent and wool--by 6.9 percent. During these same years the productivity of grain crops increased by 16.7 percent, tobacco--by 11 percent, vegetables--by 16.7 percent, grapes--by 31.1 percent, and so forth.

In recent years the republic has done intensive work to organize large animal husbandry complexes, interfarm cooperation and a stable feed base for animal husbandry. The areas planted in feed crops at the end of the 10th Five-Year

Plan amounted to 228,700 hectares, an increase of 34,900 hectares as compared to 1975. All this made it possible to increase the productivity of animal husbandry. During the 10th Five-Year Plan as compared to the 9th meat production (for the total of years) increased by more than 148,000 tons (in live weight) the milk yield from 1 cow--by more than 268 kilograms, and the average release weight of 1 head of large horned cattle--by 50 kilograms.

Especially great successes were achieved under the 10th Five-Year Plan in the development of grape and fruit growing. During these years the republic harvested 1 million 111 thousand 500 tons of grapes, which is 261,700 tons more than under the 9th Five-Year Plan, and 755,200 tons of fruit or 211,100 tons more. The successes of the grape growers were especially striking in 1981 when they sold the state 335,000 tons of grapes.

The achievements in the economic and social development of Soviet Armenia are related in the closest way to the immense scope of construction, especially in recent five-year plans. During the years of the 10th Five-Year Plan alone 5 billion 234 million rubles' worth of capital investments were invested in the development of the republic's national economy.

During postwar years 321 new industrial enterprises were put into operation, including 35 under the 10th Five-Year Plan alone. Among them are: the Echimadzin plant for large panel housing construction, plants for reinforced concrete items in the cities of Yerevan, Abovyan and Kafan, the Abovyan brewery, the meat combine in Kamo, and the canning plant in Akhtala.

Moreover, as a result of reconstruction and expansion of existing enterprises a large number of new shops, industries and capacities were put into operation. Essential improvement has been made in the distribution of capital investments among the various branches of the national economy, which was important in improving its structure. A new goal has been reached in the development of the energy base. Suffice it to say that under the 10th Five-Year Plan the republic put into operation the Armyanskaya atomic electric power station with a planned capacity of 815,000 kilowatts. The Shamskaya GES with a capacity of 170,000 kilowatts was also put into operation.

Environmental protection is a subject of special concern for the party and government. Of inestimable significance in creating a favorable ecological situation in the republic was the decree of the CPSU Central Committee and the USSR Council of Ministers, "On Measures for Protection and Efficient Utilization of Natural Resources of Lake Sevan," for whose implementation, in order to maintain the level of water in Lake Sevan in Armenia, construction was started on a unique 40-kilometer tunnel--Arpa-Sevan-- which is unprecedented in its size and the scale of the hydrotechnical construction which was put into operation in 1980. The Armenian people called it a construction project of international friendship, a route of courage and bravery.

The large amount of consistent work is being done for strict fulfillment of the requirements concerning prevention of pollution of the atmosphere, rivers, lakes, artificial bodies of water and the natural environment as a whole. Because of this we have stopped producing calcium carbide at the Nairit

scientific production association, work is being done to reduce harmful discharges from the Alaverdi mining and metallurgical combine, the Kirovakan chemical plant, the Kanakerskiy aluminum plant and so forth.

In recent years the republic has done a good deal to reconstruct and technically re-equip rail transportation. The distance of electric lines at the end of 1981 amounted to 89 percent of the overall distance of railroads in the republic. The Masis-Nurnus railroad with a distance of 47.4 kilometers went into operation in 1981. The operating distance of railroads has almost doubled as compared to 1940 and the distance of highways has increased 1.2-fold. The network of airlines has also been expanded significantly.

Unwavering attention has always been devoted to the development, expansion and updating of various kinds of transportation. Cargo turnover with all kinds of transportation increased by 12.3 billion ton kilometers during the years of the 10th Five-Year Plan as compared to the 9th, and passenger turnover --by 6.8 billion passenger-kilometers.

The anniversary year, the year of the 60th anniversary of the founding of the USSR, was marked for workers of the republic by the opening of new airways to the capital--the startup of the Zvartnots airport. In 1980 the first section of the Yerevan subway was put into operation. Actively participating in its construction were subway builders of the cities of Moscow, Leningrad, Minsk, Kharkov, Tbilisi and Tashkent, and the equipment was delivered by production associations and plants of many republics.

The network of communications, radio broadcasting and television enterprises has expanded. The number of communications enterprises (postal, telegraph and telephone) in 1981 had increased 3-fold as compared to 1950, the capacities of city telephone exchanges--21-fold, and rural ones--29-fold.

During the years of the 10th Five-Year Plan we put into operation an automated telegraph station, a communication center that operates on the basis of an electronic computer, the new Central Post Office Building in Yerevan, the Orbita space communications station, and so forth. Television transmissions in the republic are now presented on two central channels and two republic television stations. Almost every 7th family has a television set and a radio.

The entire history of the USSR shows the immense concern the socialist society shows for man, for improving the conditions of his life, labor and daily existence, and for his spiritual development, health and recreation.

On the basis of strengthening the material and technical base for production and the increased economic potential, there has been a steady improvement in the material well-being and the cultural level of the life of the Armenian people. The socialist method of organizing public production and, on the basis of this, the steady growth of the national economy created real conditions for full employment of the able bodied population of Armenia in socially useful labor. Suffice it to note that the number of workers and employees employed in the republic's national economy had increased more than 40-fold in 1981 as compared to 1922 and amounted to 1 million 233 thousand people.

The national income--the source of improvement of the material well-being and cultural level of the population--at the present time amounts to more than 5 billion rubles; during the past 20 years (1961-1980) it increased 4.9-fold, and the per capita national income--3-fold. About four-fifths of the national income during the years of the 10th Five-Year Plan was spent directly on public well-being taking into account expenditures on housing and socio-cultural construction.

The regular growth of the national income contributes to increasing the monetary incomes of the population and also public consumption funds. During the years of the 10th Five-Year Plan the real per capita income of the population increased by 24.7 percent, and during 1981 it increased by 3.5 percent as compared to 1980. The main source of increasing the real incomes of the population--monetary earnings--is also increasing. During the aforementioned period it increased by 17.7 percent. The average monthly earnings of kolkhoz workers increased by 18 percent.

Under the 10th Five-Year Plan we conducted a number of large social measures that were directed toward raising the standard of living of the population. The amounts of old-age and disability pensions were increased as were pensions for families who had lost their breadwinners, and so forth. As a result, in 1980 as compared to 1975 the sum of pensions and stipends that was paid increased by 69.3 million rubles or by 26 percent.

In postwar years, especially during the past decades, an immense program of housing construction has been carried out. Suffice it to say that during the past two five-year plans alone more than 12 million square meters of overall (usuable) dwelling space was constructed. During the course of the 10th Five-Year Plan every 5th resident of the republic acquired a new apartment or improved his living conditions.

As the material well-being of the population improves, their demands for various kinds of services increase. Consumer service enterprises rendered more than 750 kinds of services to the population in 1981. The volume of consumer services increased 1.9-fold as compared to 1975 and amounted to 86 million rubles.

One of the most important indicators that characterize the higher standard of living of the population is the growth of retail commodity turnover in state and cooperative trade, including public catering. The overall volume of retail commodity turnover in the republic increased by 36 percent under the 10th Five-Year Plan as compared to the 9th, and the amount per capita--by 23 percent. At the present time there are 4,200 public catering enterprises and 7,500 retail trade enterprises, a 7.5-fold and 2.8-fold increase over 1940, respectively. The network of firm stores of industrial ministries has also grown (there are now 39 of them).

The republic's population now annually acquires an average of more than 7.5 million rubles' worth of foodstuffs and industrial goods, which is 3.1 million rubles more than under the 9th Five-Year Plan.

From year to year the assortment of consumer goods is updated and there is increased consumption of meat and dairy products, eggs, vegetables and fruits. The population is acquiring more and more goods for cultural-domestic purposes and household use: electronic clocks, television sets, tape recorders, cameras, passenger cars and so forth.

At the present time the republic has a ramified network of hospitals, polyclinics, outpatient clinics and other health institutions. There are 11,100 physicians serving the population, a 144-fold increase over the number in 1920. In Armenia for every 10,000 people there are one and a half times as many physicians as in the United States and twice as many as in England, France, Japan and others.

The party and the government are showing a great deal of concern for protection of the health of women and children. In the republic today there are more than 240 women's consultation offices, children's polyclinics and outpatient clinics which have actually been created during the years of Soviet power. The network of sanitoriums, recreation institutions and tourist bases has expanded. In 1981 more than 440,000 people were treated and rested there, almost a 4-fold increase over 1970.

The immense changes in the economic and social development of Soviet Armenia has been accompanied by a considerable increase in the population. During the years of Soviet power the population of the republic increased 4.4-fold and amounted to 3 million 169 thousand 400 at the beginning of 1982. The death rate decreased sharply, primarily the child death rate. The average life span increased.

A typical feature of the socialist way of life is the community of education and culture of all members of the society. The republic, like the country as a whole, has completed a changeover to compulsory universal secondary education. When speaking about the typical features inherent in the people of Soviet Armenia, L. I. Brezhnev noted that, "Above all this is high culture, culture in life and communication among people, culture of labor, the lofty flight of scientific thought and the clear originality of art." Prerevolutionary Armenia where, according to data of the 1897 census, more than 90 percent of the population aged 9-49 years was illiterate, has now been transformed into a republic with universal literacy. In 1981 there were 46,400 teachers working in 1,501 schools. They trained and educated more than 594,300 students; more than 1 million people, that is, every third resident, are included in various kinds of education.

The network of preschool institutions is expanding regularly. In 1981 139,000 children were attending 1,130 preschool institutions.

Immense success has been achieved in training specialists with higher and secondary qualifications. During the period from 1941 through 1981 451,600 specialists were trained with higher and secondary specialized education. In the republic, where before the revolution there was not a single higher educational institution, there are now 13 VUZ's and 66 secondary specialized training institutions, in which 107,700 students are studying. People come to Soviet Armenia for study from the GDR, Viet Nam, Bulgaria, Romania, the

Near Eastern countries, Latin America and so forth. Hundreds of foreign Armenians obtain a higher education in its VUZ's. In terms of the number of students, the Armenian SSR has far surpassed many developed capitalist countries. Thus for every 10,000 people in the republic there are 185 students in VUZ's, while in the FRG there are 106, Italy--129, France--161, Japan--154, Austria--127 and so forth.

The rapid development of science in Soviet Armenia is one of the remarkable achievements of Soviet power. The creation of the Armenian SSR Academy of Sciences in 1943 played a decisive role in this. World recognition has been given to the achievements of Armenian scientists in the areas of astrophysics, theoretical physics, physics of elementary particles, mathematics, computer equipment and so forth. Strengthening the link between science and production, scientists participate actively in solving specific national economic problems. This year almost 20,000 scientific workers are working in Armenia, of whom 6,533 are doctors and candidates of sciences and 552 are academicians, corresponding members and professors.

Armenia is a country of ancient and original culture. As early as the 5th century Armenians created an alphabet and soon translated many books into their own language. Throughout all subsequent centuries the best works of world literature have been translated into the Armenian language. The Russian language and Russian writers brought in a new era in Armenian culture. In the unified family of nations of the USSR Armenian workers gained broad access to knowledge and culture. The many centuries of creative tradition of the reborn Armenian people found clear expression in the unprecedented flourishing of its new culture which is socialist in content, international in spirit, national in form and embued with party feeling. A powerful modern base has been created for its further development. The republic has many theaters, concert halls, movie theaters, museums and so forth. Suffice it to say that the number of movie installations in 1981 as compared to 1940 had increased from 168 to 847, and club institutions--from 897 to 1,237. There are 46 museums, 14 professional theaters and a large number of national theaters in operation. At the beginning of 1982 there were 1,368 libraries with 21 million volumes, a 10-fold increase over 1940. Book publication, the press, radio and television have been extensively developed. In 1981 more than 80 newspapers were published with an annual circulation of 254 million copies, more than 90 journals and other periodicals with an annual circulation of 22 million copies, and 1,017 books and brochures with about 10 million copies.

The rapid flourishing of the economy and culture of Soviet Armenia in the unified family of nations of the USSR is clear evidence of the constant concern of the party and government for the all-around development of all nations and nationalities.

Today the banner of the Armenian Soviet Socialist Republic has three Orders of Lenin, the Order of the October Revolution and the Order of Friendship of Peoples--awards for the great services of Armenian workers in the revolutionary movement, for their display of heroism in battle with enemies of our homeland, and for outstanding successes in communist construction. For 6 years in a row the republic has been first in the all-union socialist competition and has earned the Challenge Red Banner of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee.

Soviet Armenia has immense prospects for socio-economic development under the 11th Five-Year Plan. The production of industrial products will increase by 31 percent, and there will also be an increase in the proportion of the radio technical and electronic industry, instrument building and machine tool building. The average annual volume of gross agricultural output will increase by 11 percent. In keeping with the USSR Food Program for the period up to 1990, the republic must provide for an average annual production of grapes under the 11th Five-Year Plan in a quantity of 240,000-260,000 tons and under the 12th--310,000-330,000 tons, and these figures for grain are 310,000 tons and 320,000-340,000 tons, respectively. During the decade no less than 60,000 hectares of irrigated land are to be put into operation and 120,000 hectares of pastures are to be flooded. Measures will be carried out for starting up a number of capacities and industries. Conditions for the labor and life of the workers will improve even more and there will be extensive development of public education and culture, which will contribute to further improvement of the socialist way of life. An important result of the 11th Five-Year Plan will be further improvement of the well-being of the workers.

The Armenian people, like all peoples of our great country, are greeting the 60th anniversary of the founding of the USSR with high political and labor enthusiasm. Workers of Armenia, like all Soviet people, are working with immense enthusiasm on the anniversary watch and are multiplying their contribution to the five-year plan and the implementation of the plans for communist construction that were developed by the 26th CPSU Congress.

The decisions of the May (1982) Plenum of the CPSU Central Committee and the instructions and recommendations contained in the speech by Comrade L. I. Brezhnev at the Plenum became an immense stimulus for increasing labor activity.

Having entered the nationwide socialist competition for successful fulfillment of the assignments of the 11th Five-Year Plan, workers of Armenia, in the unified friendly family of all peoples of the USSR, are greeting with new labor achievements that glorious anniversary--the 60th anniversary of the founding of the Union of Soviet Socialist Republics.

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